



Chronic Disease

GOAL

Reduce the number of new cases as well as improve early detection and treatment of chronic diseases.

Overview

One of the biggest changes in health over the last 100 years is the dramatic change in causes of death and disability from primarily infectious and acute diseases such as pneumonia, tuberculosis, and diarrhea to chronic diseases such as heart disease, cancer, stroke, emphysema, diabetes mellitus, and arthritis. In fact, about 70% of Maine people die from only four diseases: cardiovascular disease (heart disease and stroke), cancer, chronic lung disease (primarily emphysema), and diabetes. All of these are chronic in that the disease processes often take years until the onset of symptoms, and the symptoms themselves often disable people for a number of years. In fact, nationally about one-third of all disabili-

ties are caused by one of these four diseases.

The chronic diseases covered in this chapter are often preventable. Of all cases of heart disease, stroke, cancer, type 2 diabetes, and emphysema, most are preventable. There are five underlying major causative factors common to these diseases: three behavioral risk factors of tobacco addiction, physical inactivity, and poor nutrition; and two modifiable biological factors of elevated cholesterol and

The Burden Of Selected Chronic Diseases In Maine

Disease Category (ICD9 & 10 Codes)	Primary Cause of Death 1999	Proportion of Total Deaths	Primary Cause of Hospitalization 1999	Proportion of Total Hospitalizations	Estimated Cost (in billions)
Cardiovascular Disease (390 – 459)					
(I00 – I78)					
Heart Disease (390-398, 402, 404-429)	4,564	37.2%	29,739	18.8%	1.16
(I00-I09, I11, I13, I20-I51)	3,418	27.9%	22,493	14.2%	.92
Stroke (430-438) (I60-I69)	879	7.2%	4,124	2.6%	.22
Other and unspecified	267	2.2%	3,122	2.0%	NA
Cancer (140-208) (C00-C80)	2,735	22.3%	6,583	4.2%	.52
Trachea, lung and bronchus (162) (C33-C34)	824	6.7%	802	0.5%	NA
Colon and rectum (153-154) (C18-C20)	331	2.7%	892	0.6%	NA
Female Breast (174) (C50)	215	1.8%	525	0.3%	.07
Prostate (185) (C61)	148	1.2%	352	0.2%	NA
Other and unspecified	1,217	9.9%	4,012	2.5%	NA
Chronic Lung Disease (490-496) (J40-J47)	751	6.1%	4,874	3.1%	.19
Chronic bronchitis & emphysema (491,492) (J40-J42, J43)	89	0.7%	3,168	2.0%	NA
Asthma (493) (J45-J46)	18	0.2%	1,367	0.9%	.07
Other and unspecified	644	5.3%	339	0.2%	NA
Diabetes (250) (E10-E14)	348	2.8%	1,759	1.1%	.60
Total	12,261	100.0%	158,294	100.0%	2.47

Data Source: Mortality – CDC Wonder
Hospitalizations – Maine Health Data Organization.
Estimated costs are direct and indirect health care costs.

Note: ICD-9 Codes used for hospitalization data.
ICD-10 Codes used for mortality data.

blood pressure. The three behavioral risk factors are reviewed in other chapters.

According to 1997 data from the Centers for Disease Control and Prevention (CDC), Maine has the fourth highest percent of people in the nation who die from the four major chronic diseases of cardiovascular disease, cancer, chronic lung disease, and diabetes. Diabetes, chronic lung disease, and arthritis disproportionately reduce quality of life by impairing life activities and increasing rates of hospitalizations.

With an expected doubling of Maine's elder population over the next 20 years, the burden of chronic disease is expected to grow substantially. Asthma is the only common chronic disease that occurs more often in children under age 18 than in adults. Both asthma and type 2 diabetes are increasingly common in children and young adults.

The four most common chronic diseases – cardiovascular disease, cancer, chronic lung disease, and diabetes – cost Maine about \$2.5 billion per year in health care costs. The economic, psychological, and social burdens of these diseases on individuals, families, and communities are beyond measure. However, these burdens can be dramatically reduced if proven advances in prevention, early detection, and treatment are made more available to all Maine people. As a result, we can all live longer and healthier lives.




Bureau of Health, Department of Human Services

**HOW DOES YOUR COMMUNITY SCORE?
IS YOUR COMMUNITY HEART HEALTHY?**

My Community Supports Non-Tobacco Use:

- Smoke-free School Campuses
- Smoke-free Hospital Campuses
- Smoke-free Playing Fields
- Smoke-free Parks and Fairgrounds
- Tobacco cessation easily available throughout my community

My Community Supports Physical Activity:

- Schools in my community are open before, after school hours, and on weekends for walking or for use of the gym for community members of all ages.
- Schools in my community require physical activity at every grade level (K-12).
- My community has sidewalks, paths, and road shoulders for people to walk and/or bike safely.
- In my community there are malls or public buildings open to the public for walking.
- Businesses in my community have policies to promote physical activity, such as flex-time breaks and lunch hour incentives.

My Community Supports Healthy Food Choices:

- Restaurants in my community mention low fat options on their menu, e.g., low fat milk, salad dressing, and margarine.
- Restaurants, especially chain fast food establishments, display fat and calorie content on menus.
- Schools in my community offer 1% or less fat milk.
- Schools in my community offer only 100% fruit juice, water, milk, and other healthy options in their vending machines and as part of their food services.

Strategies

PRIMARY

SECONDARY

TERTIARY

- Improved Surveillance of Chronic Diseases and Disabilities:** This strategy is especially important for asthma and arthritis, common chronic diseases for which there exists no current Statewide ongoing surveillance system to determine prevalence or incidence. There is also no ongoing surveillance system to assess the extent and impact of disabilities from chronic diseases. Surveillance is also a challenge for other chronic disease issues, but hospitalization data (Maine Health Data Organization), death certificates (Vital Records, in Bureau of Health), and Behavior Risk Factor Surveillance System (BRFSS, in Bureau of Health) currently cover, to some extent, most of the chronic diseases that commonly result in hospitalizations or death.
- Environmental Changes:** These include health promotion and policy initiatives that change the environments in which we live, work, play, and attend school to make it easier for us to make healthy choices – easier for us to be physically active, eat nutritiously, and live tobacco-free. Additionally, both indoor and outdoor improvements in air quality reduce incidence and severity of asthma and other chronic lung diseases such as emphysema.
- Education Initiatives:** Effective health education results in more people eating a nutritious diet (for instance, one that is low in saturated fat and cholesterol, high in fiber including fresh fruits and vegetables), increasing physical activity, reducing excess weight, and living tobacco-free.
- Detecting and Lowering Risk:** Screening for, identifying, and reducing elevated blood pressure (to reduce risk for heart disease and stroke), elevated cholesterol (to reduce heart disease risk), overweight and obesity, poor nutrition, physical inactivity, tobacco use, and tobacco exposure all reduce disease risk.
- Screening and Detection of Chronic Diseases:** Asthma, heart disease, diabetes, some cancers, and chronic kidney disease are often asymptomatic in the early stages and can remain undiagnosed for many years. Screening tests for these diseases allow timely identification and early treatment to prevent and reduce the complications associated with these diseases.
- Adequate Treatment for Chronic Diseases:** It is critical with almost all chronic diseases that appropriate treatment, ongoing management, and patient self-management education be initiated and maintained in order to reduce complications and hospitalizations, and to improve the length and quality of life.





Health Disparities

(Populations at risk for specific chronic diseases, based on national data in *Healthy People 2010*)

- **Youth** (higher rates of asthma, and rates of asthma rising more rapidly)
- **Elderly** (higher rates of most chronic diseases such as heart disease, stroke, diabetes, cancer, arthritis, osteoporosis)
- **Men** (higher overall heart disease death rates, higher rates of obstructive sleep apnea in men over the age of 50, higher rates of chronic obstructive pulmonary disease [COPD] over the age of 55)
- **Women** (higher death rates after a heart attack, lower rates of kidney transplantation, higher rates of illness and death from asthma, increasing death rates due to lung cancer [compared to a decreasing rates in men], higher rates of osteoporosis and arthritis)
- **Workers** (such as miners, firefighters, metal workers, paper mill workers, agriculture workers, construction workers who work with cement, and other workers who are exposed to dusts, flames, and gases that can result in exposure to respiratory hazards and higher rates of chronic respiratory illnesses)
- **People exposed to Secondhand Smoke** (including prenatal exposure) (higher rates of lung cancer, asthma, chronic otitis media, and pneumonia)
- **African Americans** (higher rates of deaths due to strokes, heart attacks, and cancer, higher rates of high blood pressure, higher rates of cancer, higher risk of chronic kidney disease, higher rates of diabetes and deaths due to diabetes, higher rates of hospitalization and death due to asthma)
- **Asian Americans** (higher risk of chronic kidney disease due to diabetes, higher rates of death due to cancer)
- **Hispanics** (higher rates of diabetes and complications from diabetes, higher rates of death due to asthma and cancer)
- **Native Americans** (higher rates of diabetes, higher risk of chronic kidney disease due to diabetes, lower transplantation rates for kidney failure, higher rates of death due to cancer)
- **Persons of Low Socioeconomic Status** (higher burden of disease for many chronic diseases such as asthma, heart disease, and diabetes even when access to care is assured, which could be due to multiple factors such as higher level of exposure to environmental pollutants, tobacco use, poor nutrition, environmental allergens [house dust mites, cockroach particles, cat and dog dander, etc.], lack of social support; and higher rates of arthritis and its associated disabilities)

Objectives

Objective numbers are *Healthy People 2010* objective numbers.

DIABETES MELLITUS

Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin secretion, insulin action, or both. Over time, especially without the benefits of proper medical care, organ complications can occur, including heart, nerve, foot, eye, and kidney damage. In the United States, diabetes is the leading cause of nontraumatic amputations, blindness among working-age adults, and end-stage kidney disease. Diabetes has risen a startling 49% nationally over the past decade, paralleling a 61% rise in obesity.

Three major types of Diabetes Mellitus:

Type 1: Usually occurring in youth, the body does not produce insulin, and treatment must include insulin in combination with proper nutrition and physical activity. Type 1 represents about 5% of all persons with diagnosed diabetes.

Type 2: Usually occurring in people over the age of 30, but recently has been seen in increasing numbers in younger adults and children. Although persons with type 2 diabetes can produce insulin, their body is unable to effectively use the insulin. Treatment for type 2 diabetes can include oral medication and/or insulin, in combination with proper nutrition and physical activity. Type 2 diabetes represents 95% of all persons with diagnosed diabetes in the United States.

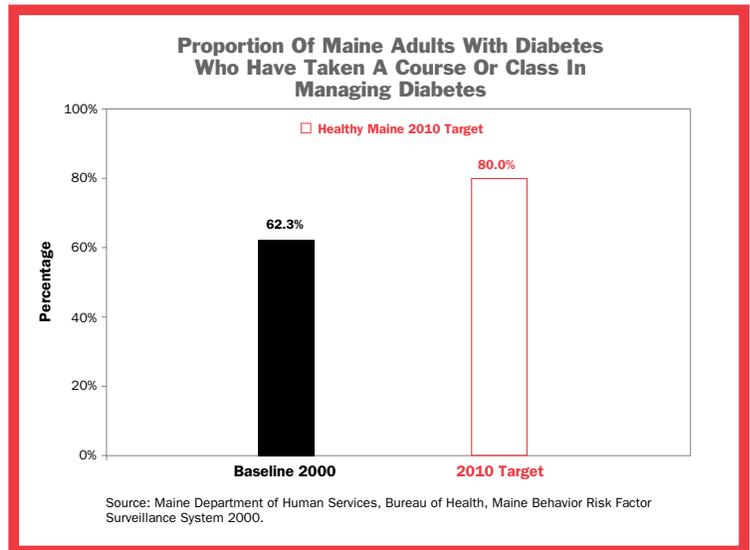
Gestational Diabetes Mellitus (GDM): Development of diabetes during pregnancy by a woman who previously was not diagnosed with diabetes. Two to five percent of all pregnancies are associated with GDM. GDM presents health risks to the fetus and newborn, and is a risk factor for the mother and offspring for developing diabetes in the future.

- **5-1 Increase the proportion of persons with diabetes who receive formal diabetes education.**

5-1a Increase the proportion of Maine adults with diabetes who have taken a course or class managing diabetes.

Healthy Maine 2010 Baseline: 62.3%
Healthy Maine 2010 Target: 80.0%

Maine BRFSS asked in 2000 whether or not adults with diabetes had ever taken a course or class in diabetes management. This is used as Maine's baseline. There is no comparable national data. However, the 1998 National Health Interview Survey reported in Healthy People 2010 indicates 45% of adults with diabetes reporting they had taken some formal diabetes education training.

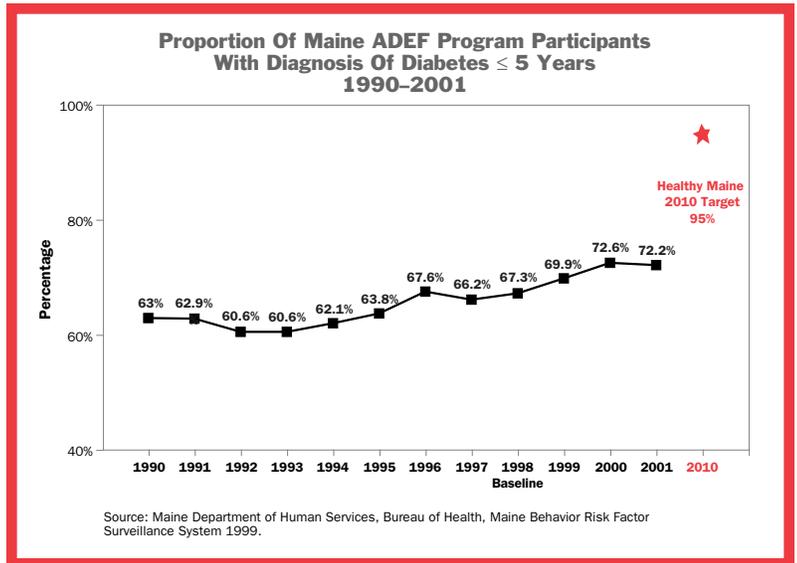




5-1b Increase the proportion of Maine ADEF Program participants with diagnosis of diabetes ≤ 5 years.

Healthy Maine 2010 Baseline: 67.3%
Healthy Maine 2010 Target: 95.0%

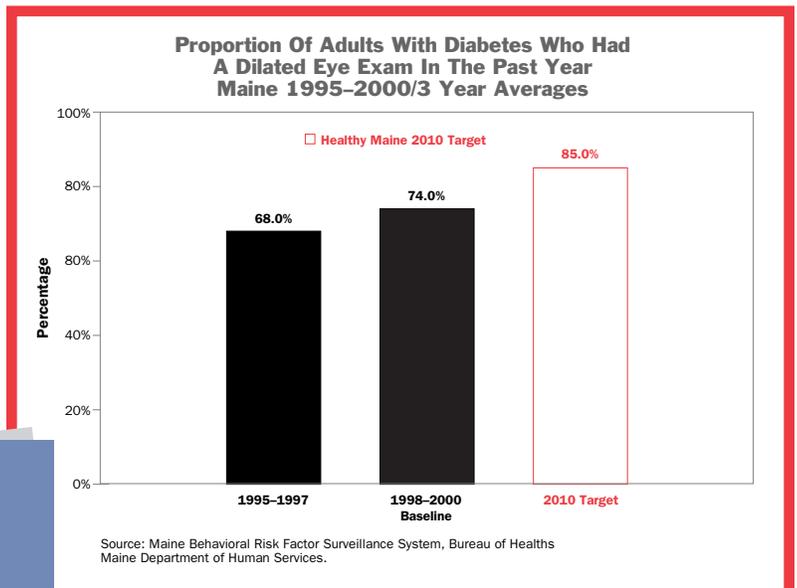
Since 1980, the Bureau of Health’s Diabetes Control Program has collected data on the number of person with diabetes receiving formal diabetes education through the Ambulatory Diabetes Education and Follow-up (ADEF) Program. As of 2000, about 25,000 adults in Maine had taken this yearlong course. The sub-objective measures what percent of those taking the course participated within five years of their diagnosis. Since earlier interventions are most effective, early participation in such courses is desired.



5-13 Increase the proportion of persons with diabetes who have an annual dilated eye examination.

Healthy Maine 2010 Baseline: 74%
Healthy Maine 2010 Target: 85%

National survey data (not completely comparable to Maine data) indicates that about 47% of adults with diabetes had a dilated eye exam in 1998 (*Healthy People 2010*).

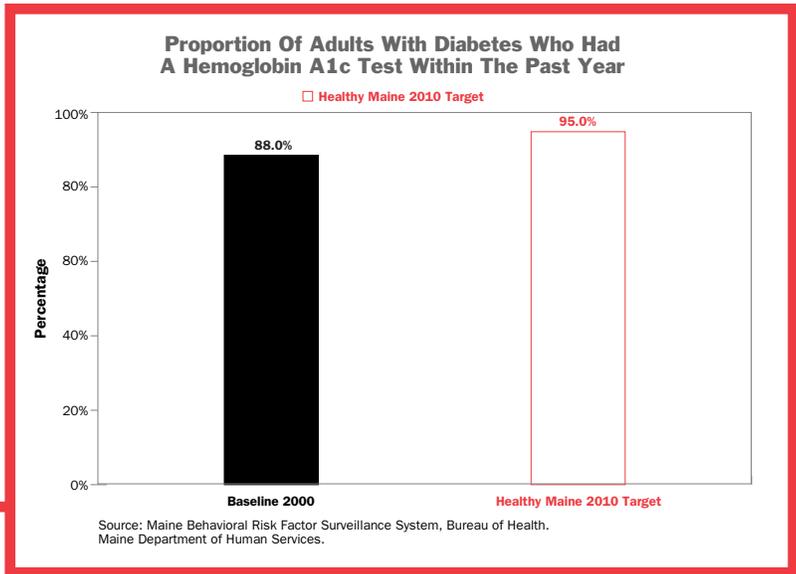


Adults with diabetes have heart disease death rates 2-4 times and stroke incidence 3 times as high as that of adults without diabetes (CDC, 1998).

Heart disease is the leading cause of diabetic-related deaths.

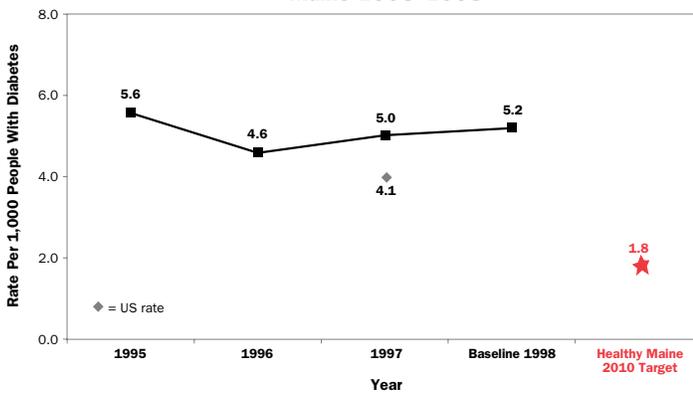
- **5-12 Increase the proportion of adults with diabetes who have a hemoglobin A1c test at least once a year.**

Healthy Maine 2010 Baseline: 88%
Healthy Maine 2010 Target: 95%



Lower Extremity Amputations In Adults With Diabetes

Rate Per 1,000 Maine Adults With Diabetes
Maine 1995-1998



Note: The population with diabetes is derived from Behavior Risk Factor Surveillance System (BRFSS) data supplied by Sara Salley, Health Policy Institute, Edmund S. Muskie School of Public Service, University of Southern Maine. Earlier years include gestational diabetes, so were not included for this objective.
Source: Maine Department of Human Services, Bureau of Health, Office of Data, Research and Vital Statistics, Maine Hospitalization Discharge Data.

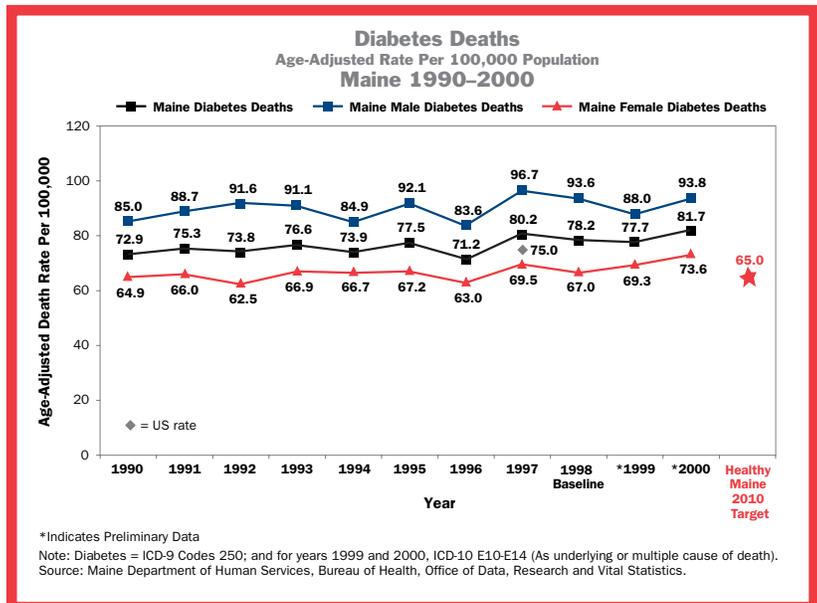
- **5-10 Reduce the rate of lower extremity amputations in adults with diabetes.**

Healthy Maine 2010 Baseline: 5.2
Healthy Maine 2010 Target: 1.8

- **5-5 Reduce the diabetes death rate.**

Healthy Maine 2010 Baseline: 78.2
Healthy Maine 2010 Target: 65.0

Approximately 63,000 Maine residents are estimated to have diabetes; only two-thirds have been diagnosed.



CHRONIC KIDNEY FAILURE

Kidney Failure: 68% of all kidney failure is caused by diabetes or high blood pressure, the remainder is mostly due to infections, autoimmune, or genetic disorders. Kidney failure rates have increased dramatically across the United States, an increase of greater than 100% over the past ten years. This, in part, reflects the significant increase in new cases of type 2 diabetes, concurrent with increasing frequency of obesity.

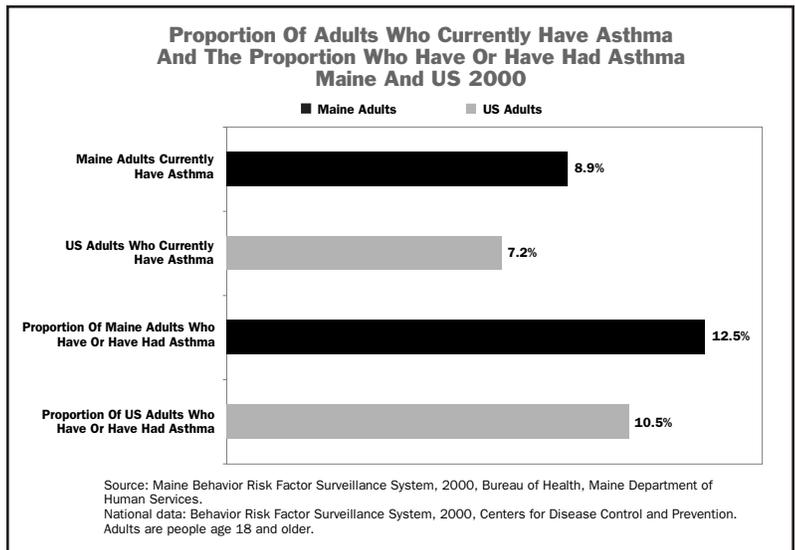
- **4-3 (Developmental) Increase the proportion of treated chronic kidney failure patients who have received counseling on nutrition, treatment choices, and cardiovascular care 12 months before the start of renal replacement therapy.**

Although Maine is unable to track this objective at this time, a national survey reported in *Healthy People 2010* shows that in 1996 45% of newly diagnosed patients with treated chronic kidney failure received this counseling.

CHRONIC RESPIRATORY DISEASE

About one in eight Maine people have a chronic respiratory disease, mainly asthma, chronic pulmonary disease (COPD), or obstructive sleep apnea.

Asthma: The numbers of people with asthma have increased over 100% nationally over the past two decades, and this rate of increase appears higher in youth. It is estimated that about one in ten Maine school children have or have had asthma. One in eight Maine adults report having had asthma at some time in their life. According to the Behavioral Risk Factor Surveillance System (BRFSS), in 2000 Maine has one of the highest self-reported prevalence of current adult asthma in the United States. Current asthma is identified as persons who report “ever been told by a doctor that you have asthma” and “still have asthma.”



Some factors that may contribute to Maine’s high asthma rates are poor indoor air quality due to strong weatherproofing, wood-fired heating systems, and secondhand tobacco smoke as well as poor outdoor air quality due in part to ozone created in Maine as well as carried on the jet stream from the Midwest and other parts of the country.

Asthma questions were added to the Behavioral Risk Factor Surveillance System in 1999. Therefore, there is not enough data to report on trends or make any future projections. However, it is known that in Maine, women are 1.5 times more likely to report current asthma than men. This is reflected on a national level where women are 1.8 times more likely to report current asthma than men. It is also clear that the current prevalence of asthma in the adult population has not changed significantly from 1999 to 2000. This, in combination with no real significant reduction in adult smoking

rates, an increasing national trend in asthma prevalence, better diagnosis and better understanding of asthma allergens and irritants indicates that the appropriate target will be to maintain our current prevalence of self-reported asthma. The Maine Legislature in 2002 established the Maine Asthma Control Program in the Bureau of Health funded by the Centers for Disease Control and Prevention. This program will help assess, track, and address asthma in Maine.

Chronic Obstructive Pulmonary Disease (COPD): COPD includes chronic bronchitis and emphysema, mostly occurring in people over the age of 65. Between 80 and 90% of all COPD is due to tobacco smoke. Some of the remainder is due to other environmental respiratory hazards as seen in certain occupations and inherited disorders such as alpha one antitrypsin deficiency.

Obstructive Sleep Apnea: Apnea occurs when there are repeated involuntary breathing pauses during sleep. Symptoms include intermittent snoring, frequent awakening from sleep, early morning headaches, excessive daytime sleepiness, and poor work or school performance. Sleep apnea is associated with higher risks for cardiovascular disease, high blood pressure, asthma, and motor vehicle crashes. Although it is estimated that about 1 in 14 Americans suffer from some form of obstructive sleep apnea, there is very little awareness among the public and health care providers, and as a result, it is felt that many people go undiagnosed and mismanaged. There are no ongoing systems for collecting data on this disorder, and, therefore, there are currently no objectives to follow sleep apnea.

- **24–8 (Developmental) Establish a surveillance system for tracking asthma deaths, illness, disability, impact of occupational and environmental factors on asthma, access to medical care, and asthma management.**

The newly established Maine Asthma Control Program in the Bureau of Health, along with other partners in Maine, are working on implementing these developmental objectives.

- **24–6 (Developmental) Increase the proportion of persons with asthma who receive formal patient education as an essential part of the management of their condition.**

A national survey in 1998 indicated that only 8.4% of people with asthma had received formal patient education (*Healthy People 2010*).

Currently, the Maine Asthma Control Program, a collaboration between the Bureau of Health, the American Lung Association of Maine, and others, and funded by the Centers for Disease Control and Prevention (CDC), is developing an ongoing school survey of kindergarten and fifth graders in Maine to help determine prevalence of asthma in school-age children.

An estimated 100,000 Maine people suffer from asthma. 20,000 are children.



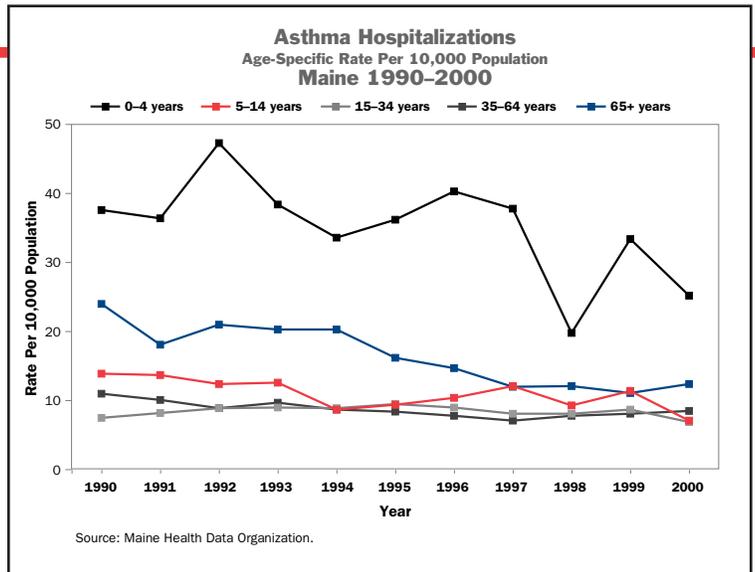
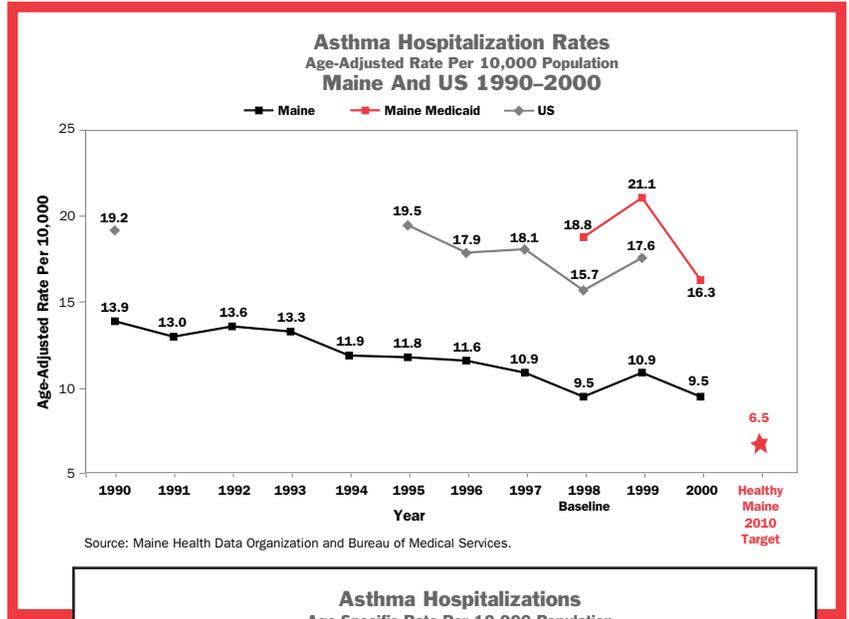
- **24-5 (Developmental) Reduce the number of school days missed by children with asthma due to asthma.**
- **24-3 (Developmental) Reduce hospital emergency department visits for asthma.**

24-3a Reduce asthma hospitalization rates.

Healthy Maine 2010 Baseline: 9.5
Healthy Maine 2010 Target: 6.5

Currently, this objective is developmental. However, with the Maine Health Data Organization’s expansion of its database, this should be measurable in the near future. Although few emergency department visits for asthma result in hospitalization, the hospitalization rate for asthma is currently given as a proxy for measuring this objective.

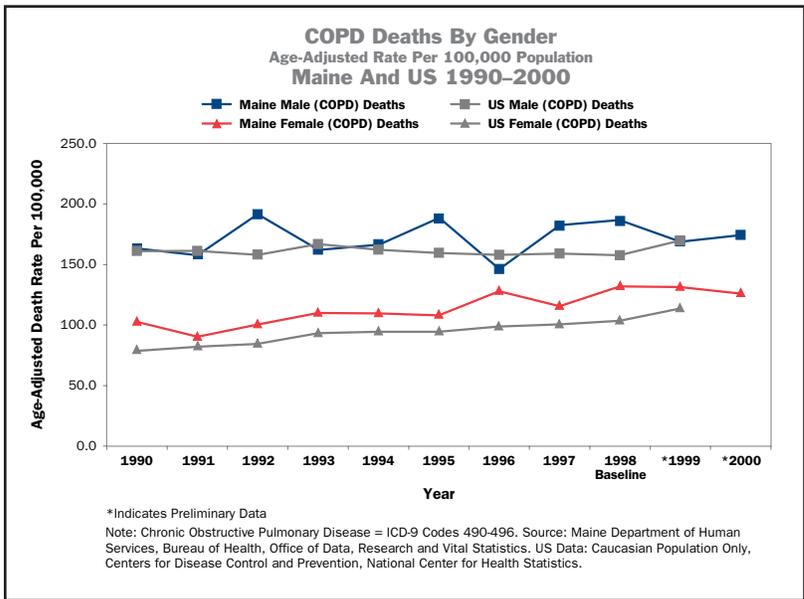
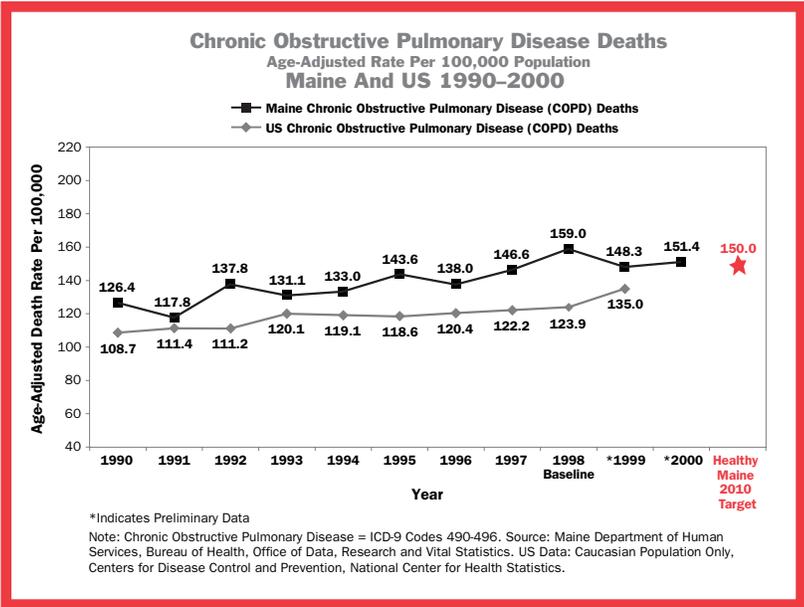
Nationally, low income, pre-school children are particularly at high risk for hospitalization for asthma. Since a large proportion of people with Medicaid Insurance are low income, high-risk children, hospitalization rates are also shown for people with Medicaid Insurance. Although it is unclear why low-income young children are at high risk for severe asthma, some factors may include high levels of exposure to secondhand smoke and other environmental allergens (house dust mites, cat and dog dander, pollutants), and lack of resources to effectively manage the disease.



About one in eight Maine people have a chronic respiratory disease, mainly asthma, chronic obstructive pulmonary disease (COPD), or obstructive sleep apnea.

- **24-10 Reduce deaths from chronic obstructive pulmonary disease (COPD).**

Healthy Maine 2010 Baseline: 159.0
 Healthy Maine 2010 Target: 150.0



CARDIOVASCULAR DISEASE

Cardiovascular disease refers to a variety of diseases and conditions affecting the heart and blood vessels; the two largest being heart disease and stroke. Congestive heart failure, hypertension (also known as high blood pressure), and diseases of the arteries, veins, and circulatory system are the other diseases and conditions that are included in the term cardiovascular disease.

The disease process that leads to cardiovascular disease begins decades before a fatal or disabling heart attack or stroke. For this reason, prevention efforts must address the lifestyle behaviors that cause this disease. Research has shown that lifestyle changes, monitoring, and treatment of risk factors can prevent or reduce cardiovascular disease.

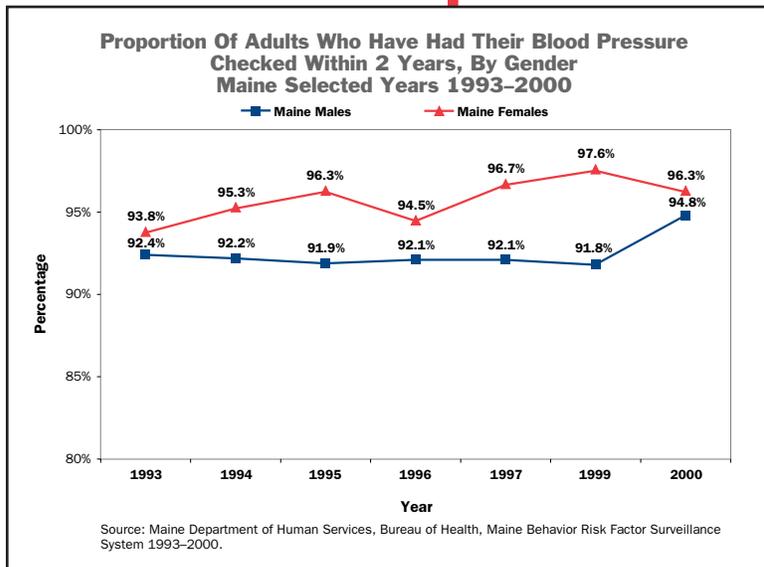
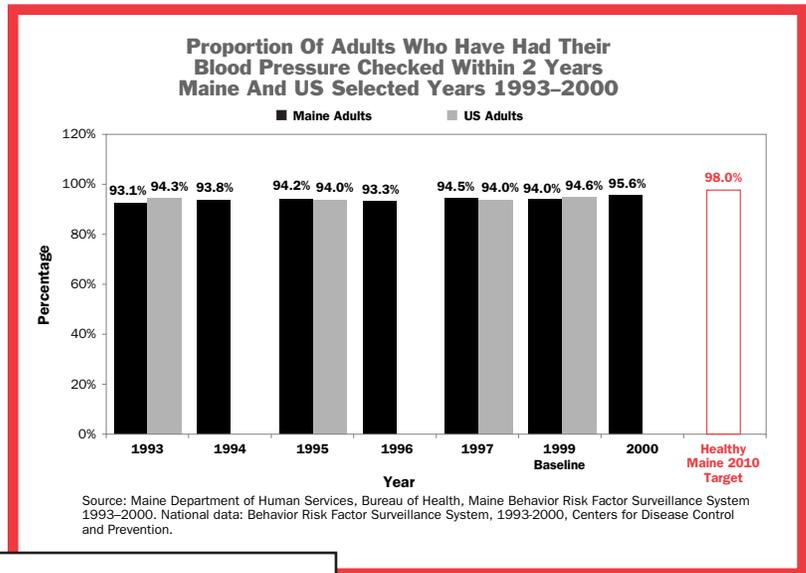
In 1999, cardiovascular disease caused approximately 39% of all deaths in Maine (over 4,500 deaths). The majority of these cardiovascular deaths were due to heart disease (3,418) and stroke (879). The cost in terms of life is significant, but cardiovascular disease also exacts a huge toll in terms of disability, days lost from work, emotional costs, and lost productivity. In 2000, there were almost 30,000 hospitalizations for Maine citizens with cardiovascular disease at a cost of \$437 million in hospital charges alone (Maine Health Data Organization, 2001).

Heart disease is the leading cause of death in Maine and across the nation, and stroke is the third leading cause of death. Maine ranks twenty-seventh in the nation and first in the New England for age-adjusted heart disease death rates (among whites). Maine ranks twenty-first in the nation and first in New England for age-adjusted stroke death rates (among whites).

Since the 1960s, deaths from heart disease (mostly coronary heart disease) and stroke have declined in the United States. These declines are mainly due to improvements in detection and treatment of cardiovascular disease, high blood pressure, and cholesterol as well as reductions in tobacco addiction rates. Heart disease and stroke share several major risk factors, including high blood pressure, tobacco addiction, high cholesterol, and overweight. Physical inactivity and diabetes are additional risk factors for heart disease.

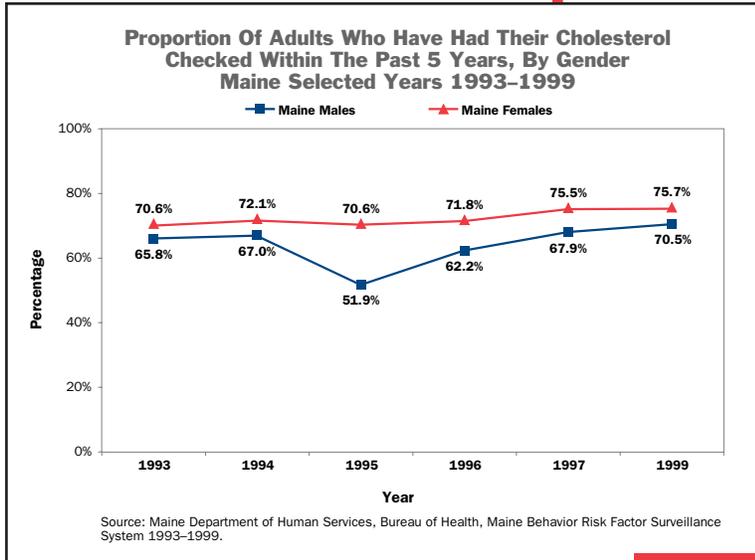
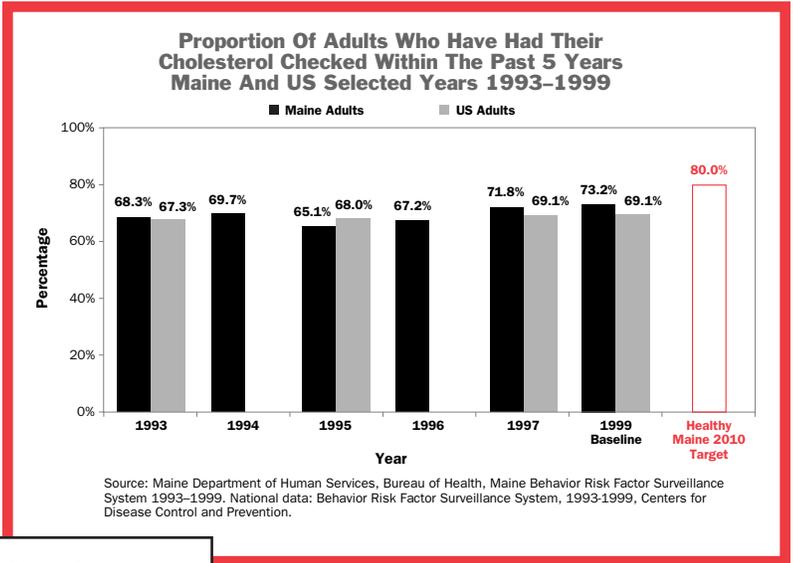
- **12-12 Increase the proportion of adults who have had their blood pressure checked within the preceding two years.**

Healthy Maine 2010 Baseline: 94%
Healthy Maine 2010 Target: 98%



- **12-15 Increase the proportion of adults in Maine who have had their blood cholesterol checked within the preceding five years.**

Healthy Maine 2010 Baseline: 73.2%
 Healthy Maine 2010 Target: 80.0%



Maine rates highest in New England for reported high cholesterol rate (32% of adults) and for high blood pressure (25% of adults).



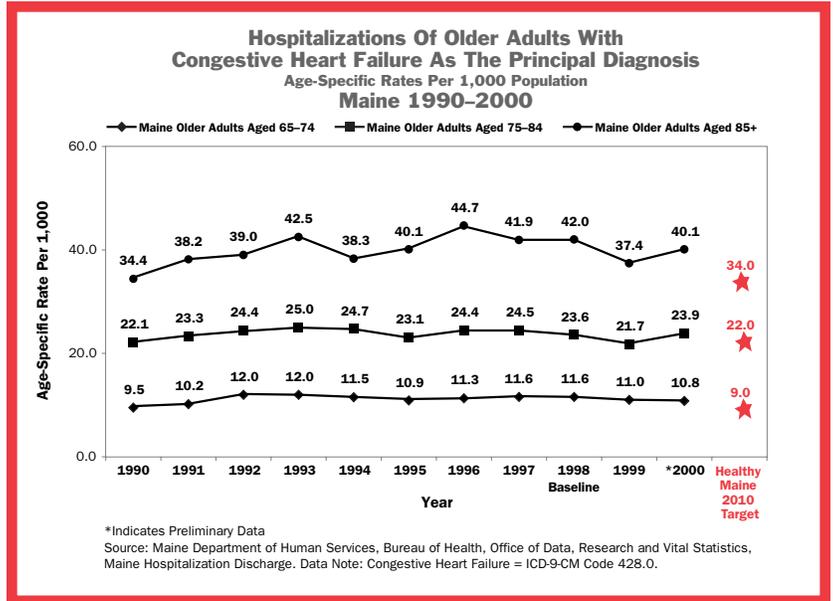
- **12-6 Reduce hospitalization of older adults with congestive heart failure as the principal diagnosis.**

Age 65-74:
Healthy Maine 2010 Baseline: 11.6
Healthy Maine 2010 Target: 9.0

Age 75-84:
Healthy Maine 2010 Baseline: 23.6
Healthy Maine 2010 Target: 22.0

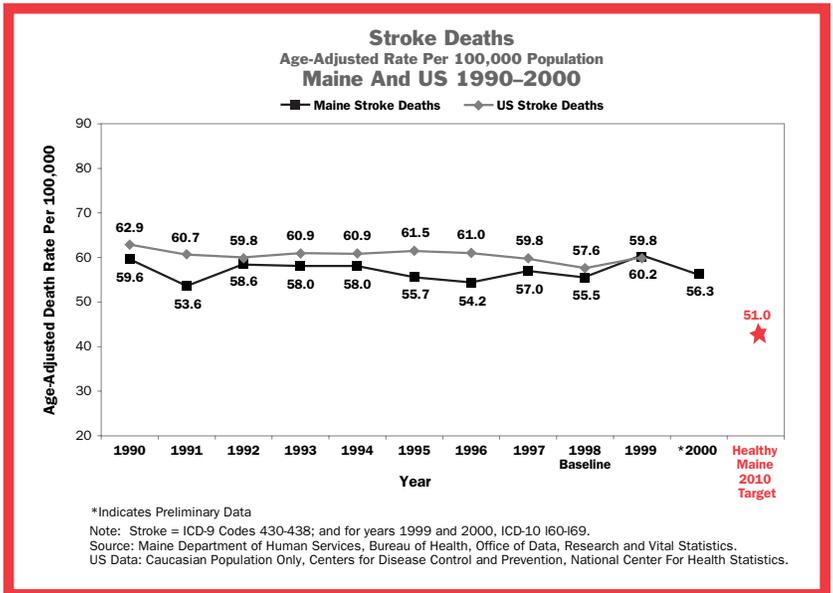
Age 85+:
Healthy Maine 2010 Baseline: 42.0
Healthy Maine 2010 Target: 34.0

National data indicates that the US rates for hospitalization with the principal diagnosis of congestive heart failure in 1997 was about 13.2 per 1,000 for ages 65 to 74; 26.7 for ages 75 to 84; and 52.7 for ages 85 years and older.



- **12-7 Reduce stroke deaths.**

Healthy Maine 2010 Baseline: 55.5
Healthy Maine 2010 Target: 51.0

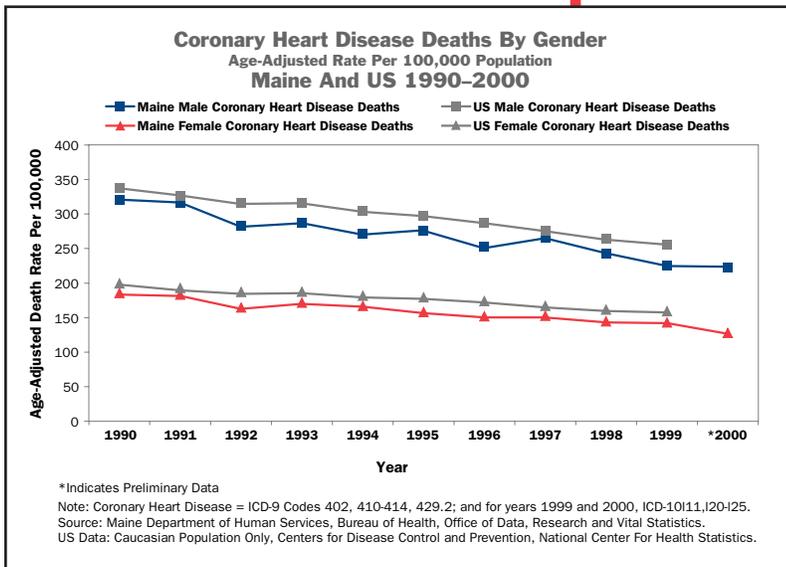
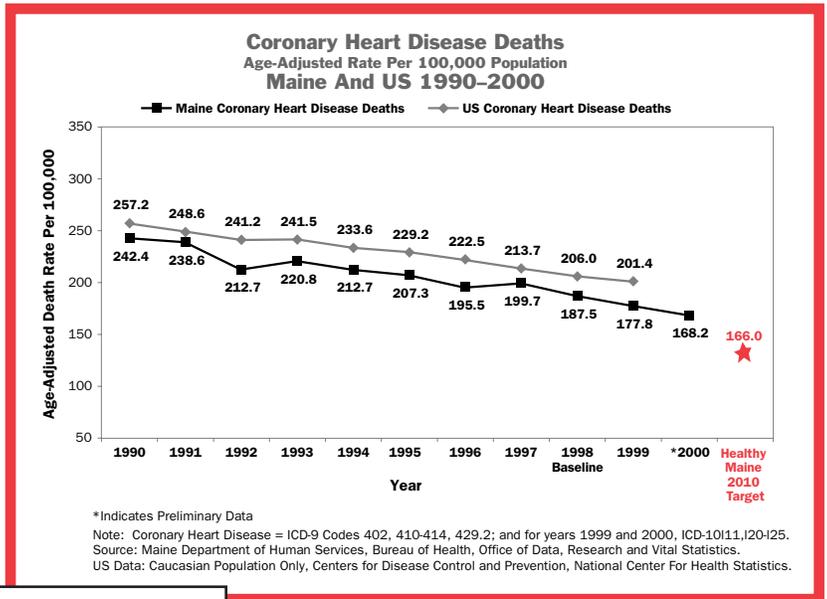


Cardiovascular disease is the leading cause of death, illness, and health care costs for Maine people.

- Key conditions that cause cardiovascular disease:**
- 1) High blood pressure
 - 2) High cholesterol
 - 3) Diabetes

• **12-1 Reduce coronary heart disease deaths.**

Healthy Maine 2010 Baseline: 187.5
Healthy Maine 2010 Target: 166.0



The health behaviors that cause cardiovascular disease often develop in childhood. The main behaviors are: tobacco consumption, secondhand smoke exposure, physical inactivity, poor nutrition, and maintaining an unhealthy weight.

One-quarter of all Maine hospital charges in 1999 were for cardiovascular disease. Medicare and Medicaid payments cover almost three-quarters (72%) of the hospital charges (MHDO).

CANCER

Cancer is not just one disease, but rather a group of diseases that includes a process of abnormal and uncontrolled growth and spread of cells. Cancers are caused by internal (genetic and hormonal) as well as external (viral, social, environmental) factors. About 7,000 new cancer cases are diagnosed each year in Maine. The United States saw a decline in cancer death rates over the past decade. However, Maine did not experience the same decrease. Cancer is the second leading cause of death in Maine and the nation. Causing about 3,000 deaths every year in Maine, only heart disease causes more deaths than cancer. However, cancer results in the loss of more years of healthy life than heart disease since cancer deaths occur at younger ages.

The good news is that cancer is increasingly a curable and preventable disease. It is estimated that about 50% or more of all cancer can be prevented through tobacco cessation, increased physical activity, weight control, and improved dietary habits such as reducing fat consumption and increasing fruit and vegetable consumption. The five-year survival rate for all cancers is now 62%, and the five-year survival rate for screenable cancers (cervix, colon, rectum, breast, oral, prostate, skin, and testes) is 82%.

Although a reduction in the overall cancer incidence is an objective, it is unlikely to be achieved unless there are significant reductions in the incidences of the four major cancers – breast, prostate, lung, and colorectal. And, this is unlikely to be achieved by 2010. The reasons are several. First, breast and prostate cancer are not known to have significant risk factors for which there are good primary prevention strategies. Second, although about 90% of lung cancer could be prevented over a 10–20 year period if smoking were eliminated, this is unlikely to happen by 2010. Thirdly, colorectal cancers could be reduced if screenings such as colonoscopies are increased significantly, but incidence of this cancer could also temporarily rise because of an increase in early diagnoses of cancer through screenings.

Melanoma and cervical cancers are two cancers that have the potential for significant incidence reductions (melanoma through reduced sunburn exposure and cervical cancer through sexually transmitted disease prevention measures and Pap smears). However, since these cancers are much less common than the above four, reductions in these cancers would only have a minor effect on the overall cancer incidence rate.

Two types of cancers are worth noting because of Maine-specific issues: non-melanoma skin cancers and bladder cancer. Non-melanoma skin cancers – mostly basal cell carcinoma and squamous cell carcinoma – are the most common malignancies in Caucasians. Although these cancers are most often not reported, therefore we do not know the incidence of these in Maine, it is felt because of Maine's largely Caucasian population that we probably have a proportionately higher burden of these cancers than the rest of the nation. The good news is that these cancers have low mortality rates and are very preventable through reducing skin exposure to the sun. Reducing sun exposure also helps to reduce one's risk of melanoma, a particularly deadly form of skin cancer and one whose incidence rate nationally has increased faster than any other cancer in the 1970s and 1980s.

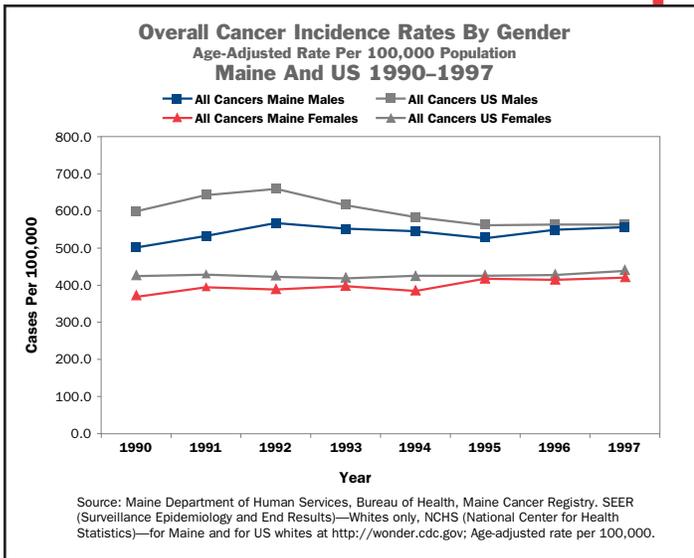
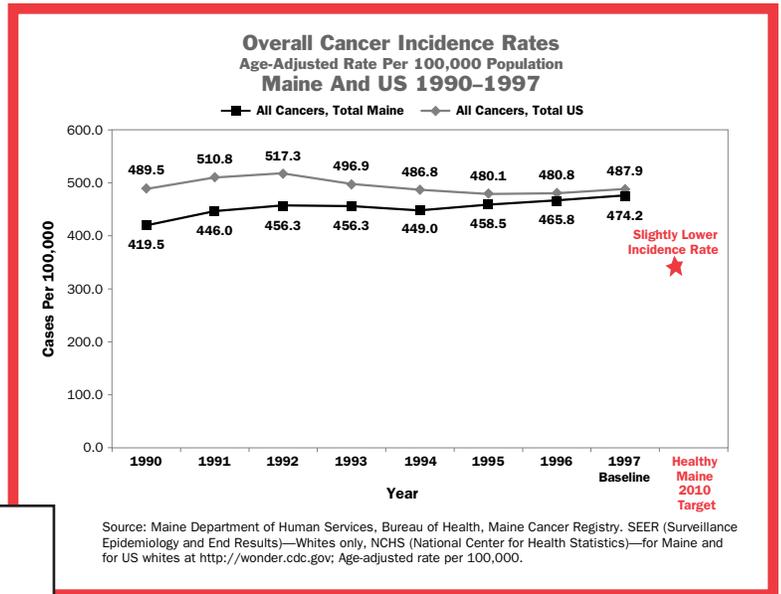


Maine has the second highest mortality rate in the nation of bladder cancer, and fourth highest in the nation among whites (1995–1998). Half of the cases are probably related to smoking; a quarter to exposures such as to heavy metals or arsenic. A study funded by the National Cancer Institute is underway to more fully analyze Maine's high bladder cancer rates.

- **Reduce the overall cancer incidence rate.**

Beginning in 1995, the Maine Cancer Registry began collecting cases using information from death certificates. This practice increases completeness and may cause an increase in the incidence of cancer. However, any increase is a more accurate reflection of cancer rates in Maine.

Healthy Maine 2010 Baseline: 474.2
 Healthy Maine 2010 Target: slightly lower incidence rate

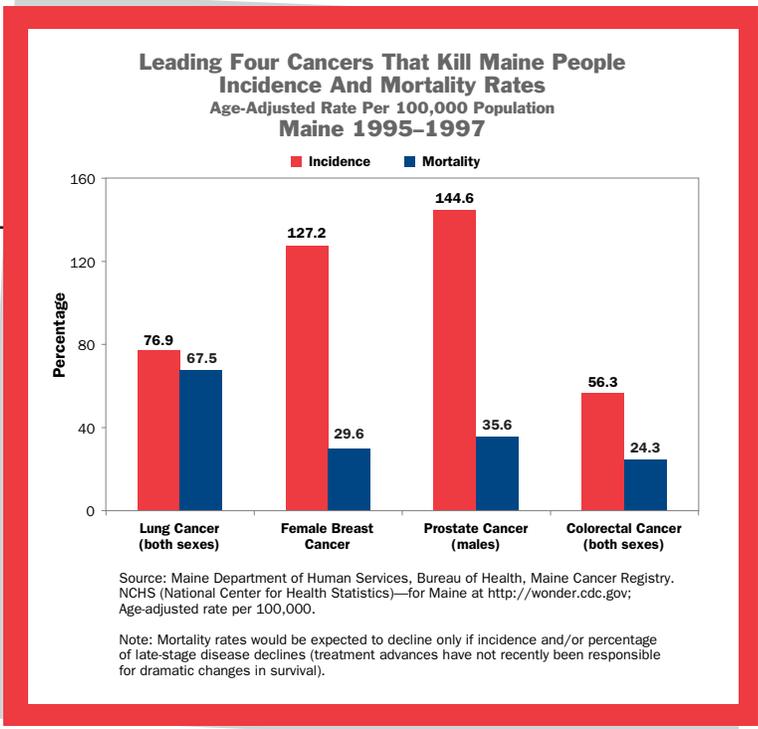
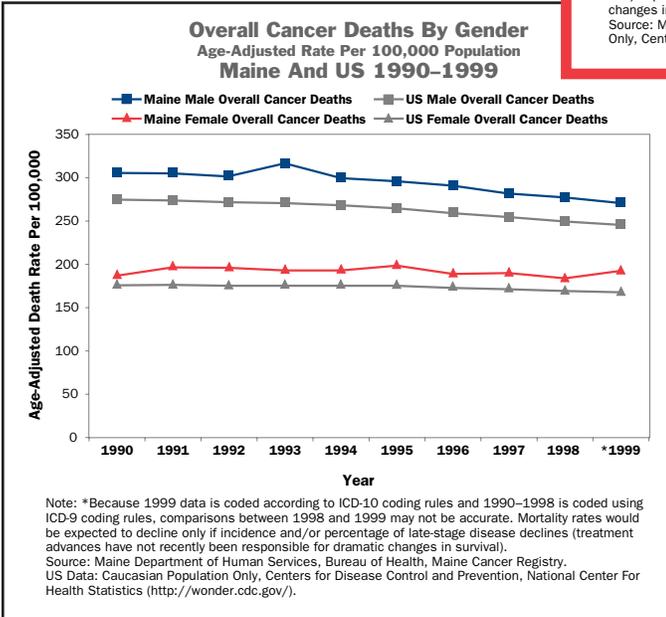
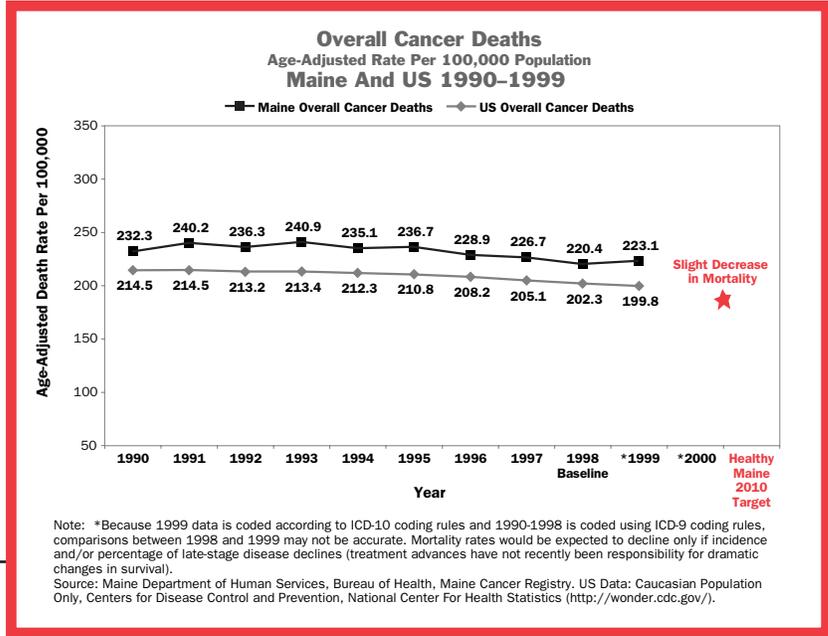


Cancer death rates in Maine are generally higher than the United States. This could be due to a number of factors, including delays in diagnosis, lack of access to appropriate treatment, and higher incidences of more deadly forms of cancer.

About 7,000 Maine people are diagnosed with cancer every year.

• **3-1 Reduce the overall cancer death rate.**

Healthy Maine 2010 Baseline: 220.4
 Healthy Maine 2010 Target: slight decrease in mortality



- Increase the percentage of cases of cancer detected at local stage.

Staging Percents For Selected Cancers Maine* And US (SEER)**

Cancer Site		Local	Regional	Distant	Unknown
Female Breast	US	64.0	28.0	5.0	3.0
	ME	66.8	28.5	3.6	1.1
Cervical	US	56.0	30.0	8.0	6.0
	ME	54.8	34.1	7.2	3.8
Colorectal, Total	US	38.0	38.0	19.0	6.0
	ME	37.2	41.5	17.0	4.3
Colorectal, Males	US	38.0	37.0	20.0	5.0
	ME	37.9	42.0	16.7	3.5
Colorectal, Females	US	37.0	39.0	19.0	6.0
	ME	36.4	41.1	17.4	5.1
Prostate	US	85.0		6.0	9.0
	ME	72.2	15.1	6.9	5.9
Melanoma, Total	US	82.0	9.0	4.0	6.0
	ME	72.3	8.5	2.6	16.6
Melanoma, Males	US	80.0	10.0	4.0	6.0
	ME	73.3	10.1	3.1	13.5
Melanoma, Females	US	84.0	8.0	3.0	5.0
	ME	71.0	6.6	1.9	20.5

Note: Staging does not include in-situ diagnoses.

* The Maine Cancer Registry began collecting summary stage information in 1995.

Maine data is from 1995–1997.

**US stage data for the white population only from the 1973–1999 report.

SEER data is from 1992–1998.

Source: Maine Cancer Registry, Bureau of Health, Maine DHS.

WHAT IS STAGING OF CANCER?

Staging of cancer is a way of categorizing how far a cancer has spread from its point of origin. **Local stage disease is limited to the organ of origin. Regional stage disease has spread beyond the organ of origin into surrounding tissues, organs, or certain lymph nodes. Distant stage disease, metastasis, occurs when tumor cells break away from the tumor of origin and travel to other parts of the body and begin a new growth.** Surveillance, Epidemiology, and End Results (SEER) Summary Staging is the current standard used for staging.

CANCER STAGE DISTRIBUTION

Maine-Specific ALL Cancer	Targets: Because the Maine Cancer Registry began collecting staging information in 1995, staging trends are not available for projecting a quantitative 2010 target. For all objectives related to cancer stage at diagnosis, the Healthy Maine 2010 target will be to increase the proportion of cancers detected at the local stage. The survival rate for cancers detected at the local stage is much higher than for cancers detected at the distant stage.		Healthy Maine Baseline ¹	US Baseline ²	Healthy Maine 2010 Target ³
	Stage Distribution⁴ Objectives				
Maine-Specific BREAST Cancer	Early Detection of Breast Cancer Increase the percentage of cases detected at local stage.	<ul style="list-style-type: none"> • Cases detected early (local disease) have about a 96% chance of living for at least five more years. • Cases detected late (disease that has spread to another part of the body) have only a 21% chance of living for five more years. 	MCR 1995-1997 Local 66.8%	SEER 1992-1998 64.0%	MCR 1995-2010 Higher % of local disease
Maine-Specific CERVICAL Cancers	Early Detection of Cervical Cancer Increase the percentage of cases detected at local stage.	<ul style="list-style-type: none"> • Cases detected early (local disease) have about a 92% chance of living for at least five more years. • Cases detected late (disease that has spread to another part of the body) have only a 15% chance of living for five more years. 	MCR 1995-1997 Local 54.8%	SEER 1992-1998 56.0%	MCR 1995-2010 Higher % of local disease
Maine-Specific COLO-RECTAL Cancers	Early Detection of Colorectal Cancer Increase the percentage of cases detected at local stage.	<ul style="list-style-type: none"> • Cases detected early (local disease) have about a 90% chance of living for at least five more years. • Cases detected late (disease that has spread to another part of the body) have only an 8% chance of living for five more years. 	MCR 1995-1997 Local 37.2%	SEER 1992-1998 38.0%	MCR 1995-2010 Higher % of local disease
Maine-Specific PROSTATE Cancers	Early Detection of Prostate Cancer Maintain the high rate of cases detected at local stage.	<ul style="list-style-type: none"> • Cases detected early (local disease) have about a 100% chance of living for at least five more years. • Cases detected late (disease that has spread to another part of the body) have only a 34% chance of living for five more years. 	MCR 1995-1997 Local 72.2% Local/Regional 87.3%	SEER 1992-1998 No data for local disease 85.0%	MCR 1995-2010 Same % of local disease
Maine-Specific MELANOMA Cancers	Early Detection of Melanoma Cancer Increase the percentage of cases detected at local stage.	<ul style="list-style-type: none"> • Cases detected early (local disease) have about a 96% chance of living for at least five more years. • Cases detected late (disease that has spread to another part of the body) have only a 12% chance of living for five more years. 	MCR 1995-1997 Local 72.3% (May be artificially low because of high rates of unknown stage in the database)	SEER 1992-1998 82.0%	MCR 1995-2010 Higher % of local disease

¹ Data Sources: MeBRFSS (Maine Behavioral Risk Factor Surveillance Survey), MCR (Maine Cancer Registry), SEER (Surveillance Epidemiology and End Results) – whites only, NCHS (National Center for Health Statistics) – for Maine and for US whites at <http://wonder.cdc.gov>; N.B. Mortality rates for Maine and the US were obtained from the same source so they would be comparable; however, mortality rates for Maine seen elsewhere which generated by the BOH ODRVS may be slightly different, depending on when the rates are calculated and population estimates used.

² National comparison figures are not currently available for BRFSS Prevention and Screening Behaviors, because the measures we have chosen for Maine combine responses for more than one BRFSS question. For example, of all the women 50+ surveyed we wanted to know who reported having had a mammogram within the past two years AND having had a CBE in the past two years, because we are attempting to approximate compliance with actual screening recommendations. This data is not easily obtained from the national web site for the country as a whole.

³ Targets have been selected based on a combination of the following information, as available: external (national) comparison figures; internal (Maine) time trends; and expectations about what interventions will be in place to realistically change prevention and early detection behaviors. Targets may represent absolute numbers or simply a trend (improvement or no worsening); numbers or trends may need to be determined by rolling averages or measures for aggregated years due to small numbers.

⁴ Stage at diagnosis is the extent to which a cancer has progressed when the cancer is first diagnosed. The Maine Cancer Registry uses SEER Summary Stage, which defines a localized cancer as one, which is limited to the organ of origin. Survival rates for patients with local disease are significantly better than for those with regional disease (extended beyond the limits of the organ of origin) or distant disease (cancer which has traveled to another part of the body and is no longer connected to the original tumor).

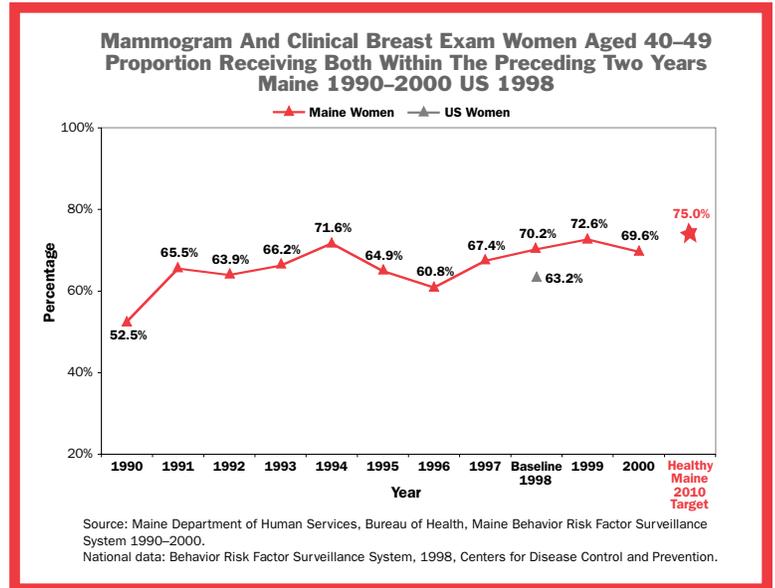


BREAST CANCER

- **3-13 Increase the proportion of women who report receiving both a mammogram and a clinical breast examination in the past two years (for women aged 40-49) and in the past one year (for women aged 50 and over).**

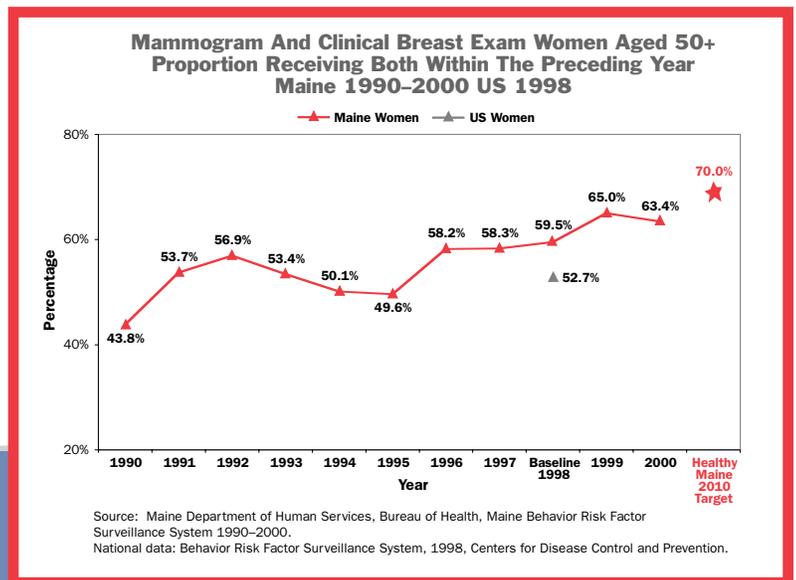
3-13a Increase the proportion of women ages 40-49 who report receiving both a mammogram and a clinical breast examination in the past two years.

Healthy Maine 2010 Baseline: 70%
Healthy Maine 2010 Target: 75%



3-13b Increase the proportion of women age 50 and over who report receiving both a mammogram and a clinical breast examination in the past one year.

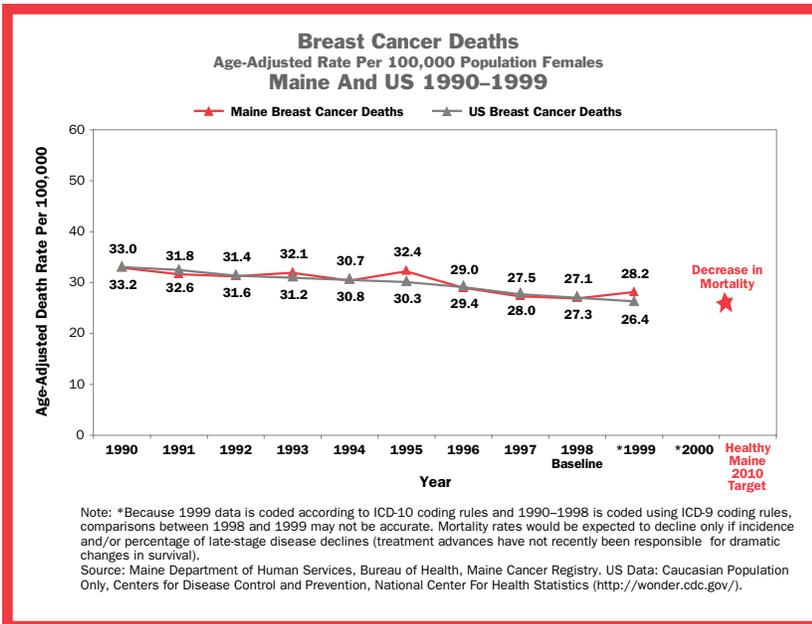
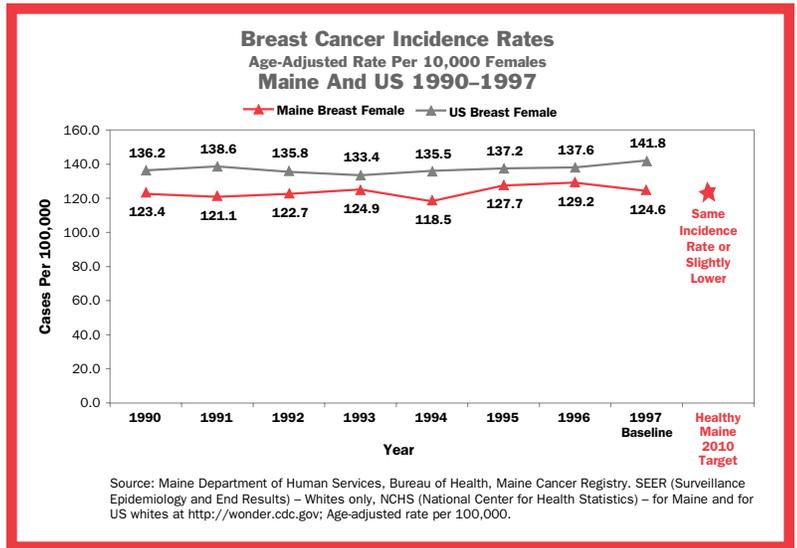
Healthy Maine 2010 Baseline: 59%
Healthy Maine 2010 Target: 70%



The five-year survival rate for all cancers is 62% and the five-year survival rate for screenable cancers (cervical, colon, rectum, breast, oral, prostate, skin, and testes) is 82%.

- **Reduce the breast cancer incidence rate.**

Healthy Maine 2010 Baseline: 124.6
 Healthy Maine 2010 Target: same incidence rate or slightly lower



- **3-3 Reduce the breast cancer death rate.**

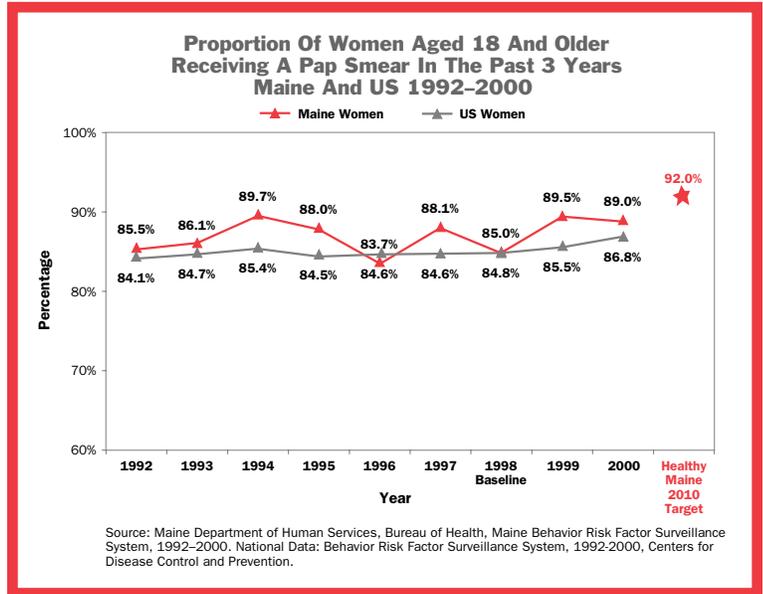
Healthy Maine 2010 Baseline: 27.1%
 Healthy Maine 2010 Target: decrease in mortality

CERVICAL CANCER

- **3-11 Increase the proportion of women who receive a Pap test in the past 3 years.**

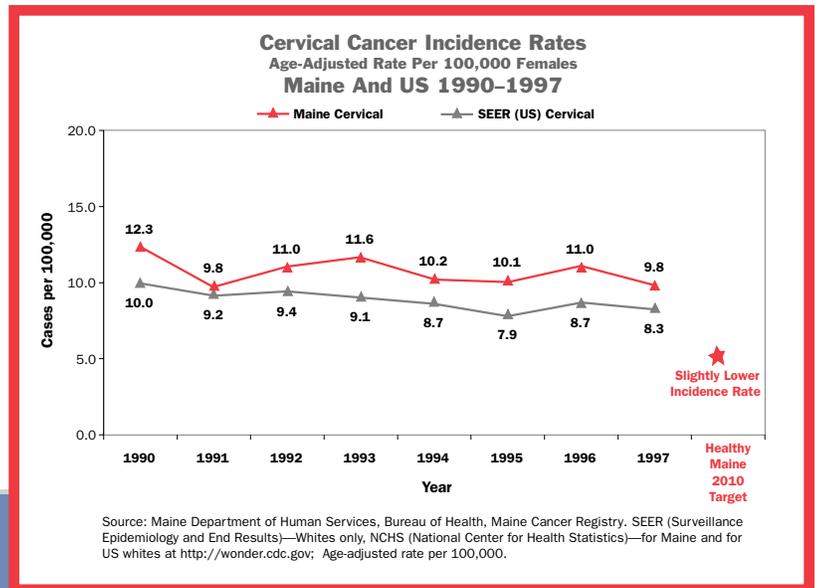
Healthy Maine 2010 Baseline: 85%
Healthy Maine 2010 Target: 92%

Survey question is asked only of women who have a uterine cervix. Similar national data indicate that an estimated 79% of women in 1998 had had a Pap smear in the previous three years.



- **Reduce the cervical cancer incidence rate.**

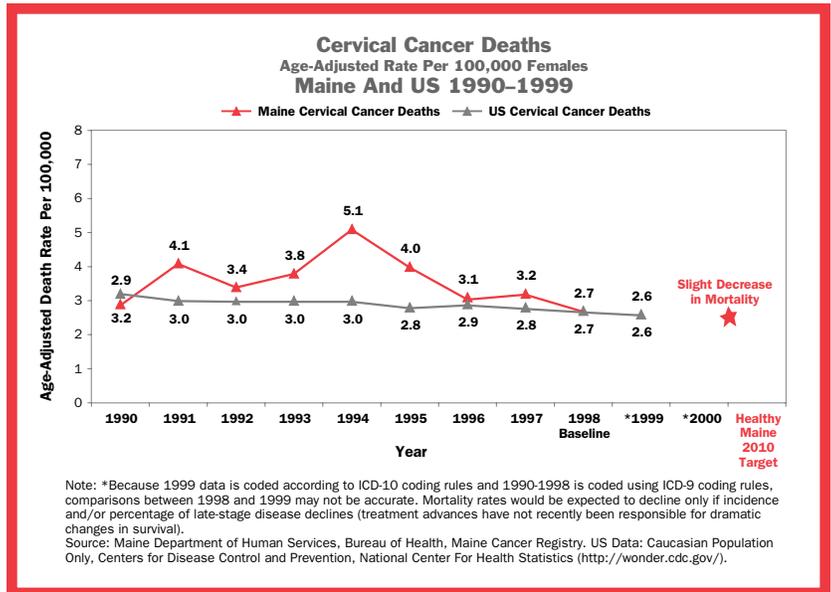
Healthy Maine 2010 Baseline: 9.8
Healthy Maine 2010 Target: slightly lower incidence rate



Cervical cancer deaths could essentially be eliminated by expanded screening and greater control of human papillomavirus.

- **3-4 Reduce the cervical cancer death rate.**

Healthy Maine 2010 Baseline: 2.7%
 Healthy Maine 2010 Target: slight decrease in mortality



HOW IMPORTANT IS IT TO DETECT CANCER IN ITS EARLY STAGES?

People with early detected **Breast Cancer** (disease is found local, i.e., in the breast only) have about a **96%** chance of living at least five years; those with disease detected late (cancer has spread to another part of the body) have only a **21%** chance of living at least five years.

People with early detected **Colorectal Cancer** have about a **90%** chance of living at least five years; detected late, only **8%** chance.

People with early detected **Cervical Cancer** have about a **92%** chance of living at least five years; detected late, only **15%**.

People with early detected **Prostate Cancer** have about a **100%** chance of living at least five years; detected late, only **34%**.

People with early detected **Melanoma** have about a **96%** chance of living at least five years; detected late, only **12%**.

COLORECTAL CANCER

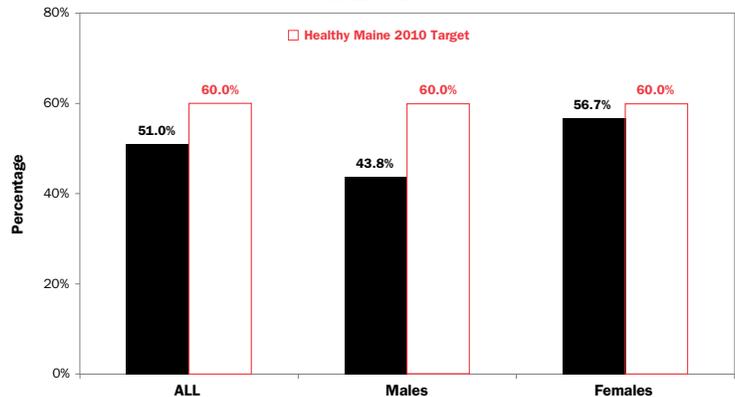
Although Maine has a higher rate of colon cancer screening than the US as a whole, it has the highest mortality rate in the country.

- **3–12 Increase the proportion of Maine adults 50 and over who report having a fecal occult blood test in the past 2 years or having had a sigmoidoscopy or colonoscopy in the past 5 years.**

Healthy Maine 2010 Baseline: 51%
Healthy Maine 2010 Target: 60%

Similar national data indicates that in 1999 an estimated 35% of people 50 years and older had a fecal occult blood test in the preceding two years and that 37% had ever had a sigmoidoscopy.

Proportion Of Adults Aged 50+ Who Report Having A Fecal Occult Blood Test In The Past 2 Years Or Having Had A Sigmoidoscopy Or Colonoscopy In The Past 5 Years, By Gender Maine 1999

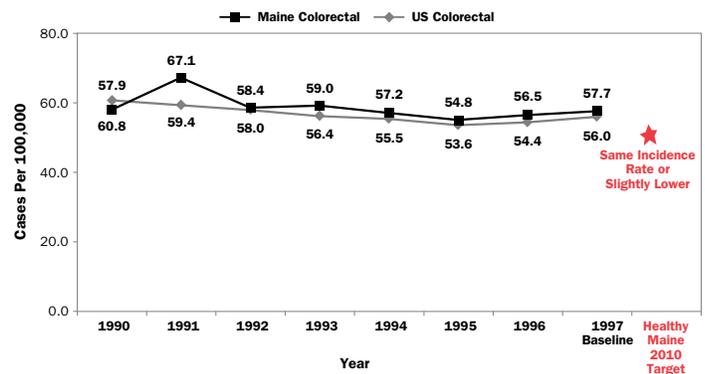


Source: Maine Department of Human Services, Bureau of Health, Maine Behavior Risk Factor Surveillance System, 1999.

- **Reduce the colorectal cancer incidence rates.**

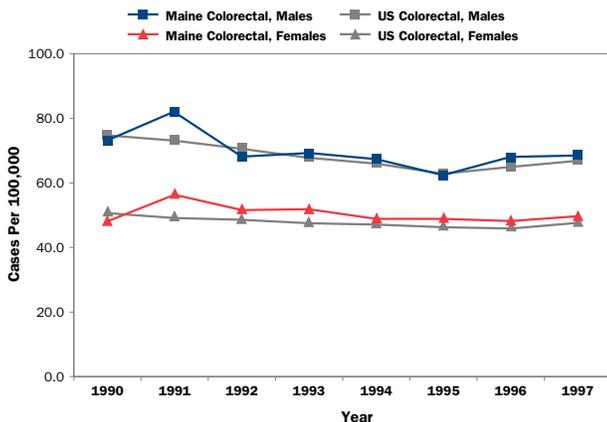
Healthy Maine 2010 Baseline: 57.7%
Healthy Maine 2010 Target: same or slightly lower incidence rate

Colorectal Cancer Incidence Rates
Age-Adjusted Rate Per 100,000 Population
Maine And US 1990–1997



Source: Maine Department of Human Services, Bureau of Health, Maine Cancer Registry. SEER (Surveillance Epidemiology and End Results) – whites only, NCHS (National Center for Health Statistics) – for Maine and for US whites at <http://wonder.cdc.gov>; Age-adjusted rate per 100,000.

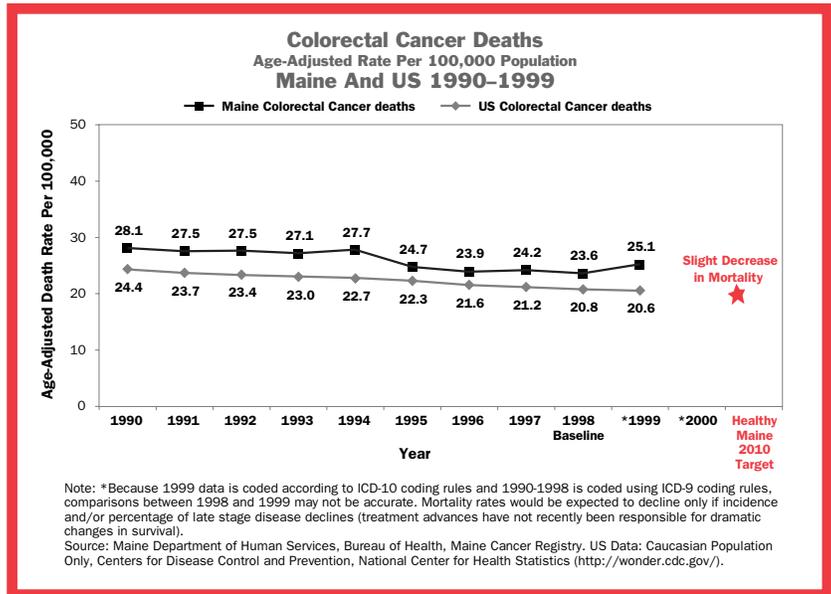
Colorectal Cancer Incidence Rates By Gender
Age-Adjusted Rate Per 100,000 Population
Maine And US 1990–1997



Source: Maine Department of Human Services, Bureau of Health, Maine Cancer Registry. SEER (Surveillance Epidemiology and End Results) – whites only, NCHS (National Center for Health Statistics) – for Maine and for US whites at <http://wonder.cdc.gov>; Age-adjusted rate per 100,000.

• **3-5 Reduce the colorectal cancer death rate.**

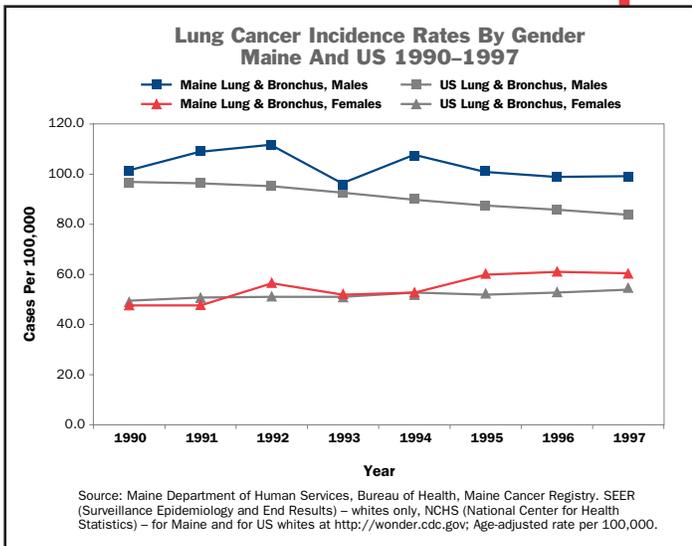
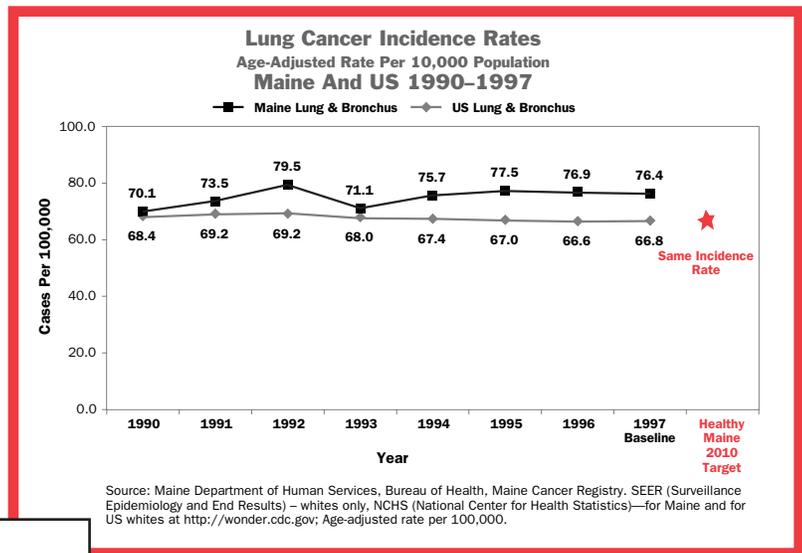
Healthy Maine 2010 Baseline: 23.6
 Healthy Maine 2010 Target: slight decrease in mortality rate



LUNG CANCER

• **Reduce the lung cancer incidence rate.**

Healthy Maine 2010 Baseline: 76.4
 Healthy Maine 2010 Target: same or slightly lower incidence rate



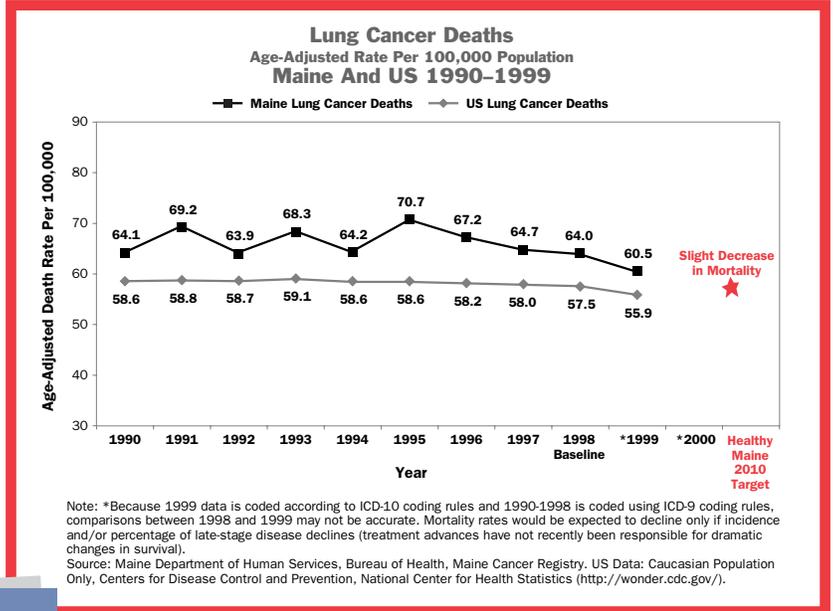
Lung cancer is the leading cause of cancer deaths, killing about 900-1,000 Maine people every year. Yet about 90% of lung cancer could be prevented over a 10-20 year period if smoking were eliminated.



Chronic Disease

- **3-2 Reduce the lung cancer death rate.**

Healthy Maine 2010 Baseline: 64.0%
 Healthy Maine 2010 Target: slight decrease in mortality

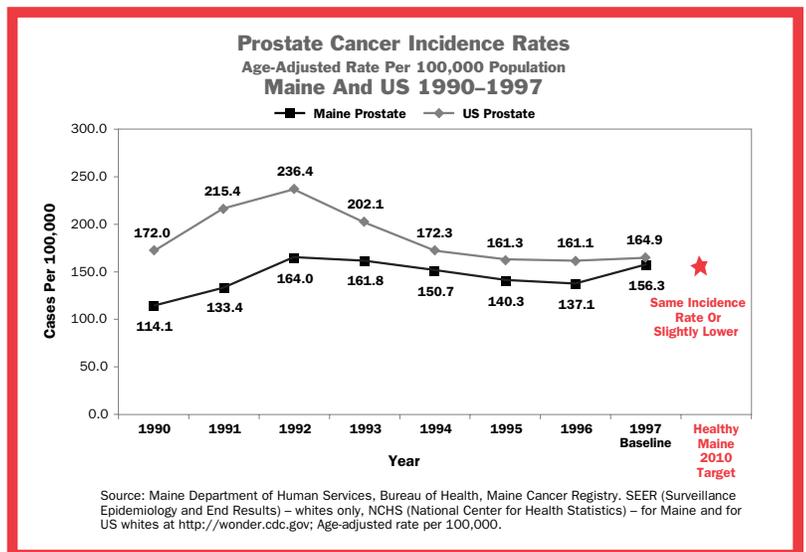


Since 1987, more women in the US die from lung cancer than from breast cancer.

PROSTATE CANCER

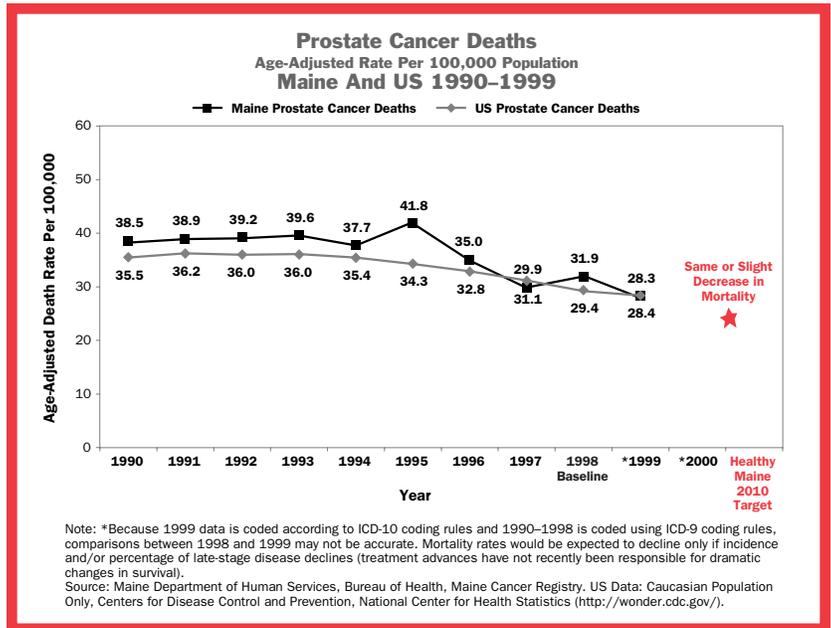
- **Reduce the prostate cancer incidence rate.**

Healthy Maine 2010 Baseline: 156.3
 Healthy Maine 2010 Target: same incidence rate or slightly lower



• **3-7 Reduce the prostate cancer death rate.**

Healthy Maine 2010 Baseline: 31.9%
 Healthy Maine 2010 Target: same or slight decrease in mortality



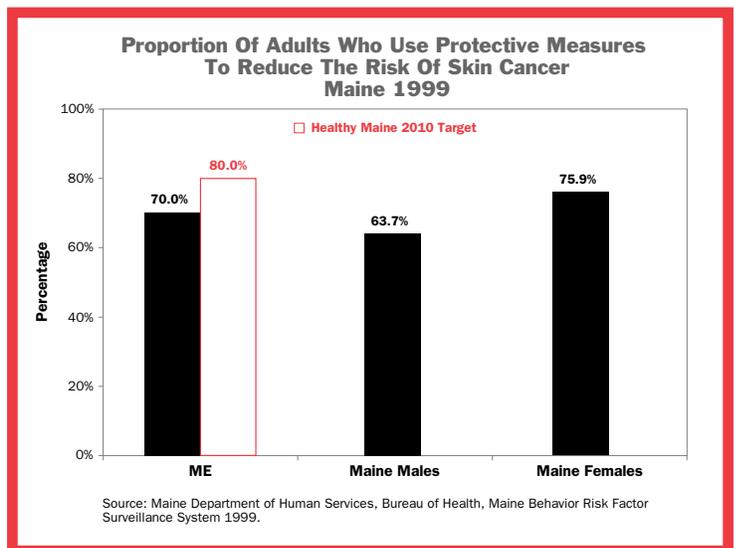
Melanoma is a particularly deadly form of skin cancer whose incidence rate nationally has increased faster than any other cancer in the 1970s and 1980s. Reducing sun exposure reduces one's risk for melanoma as well as other skin cancers.

SKIN CANCER

• **3-9 Increase the proportion of persons who use at least one protective measure that may reduce risk of skin cancer.**

Healthy Maine 2010 Baseline: 70%
 Healthy Maine 2010 Target: 80%

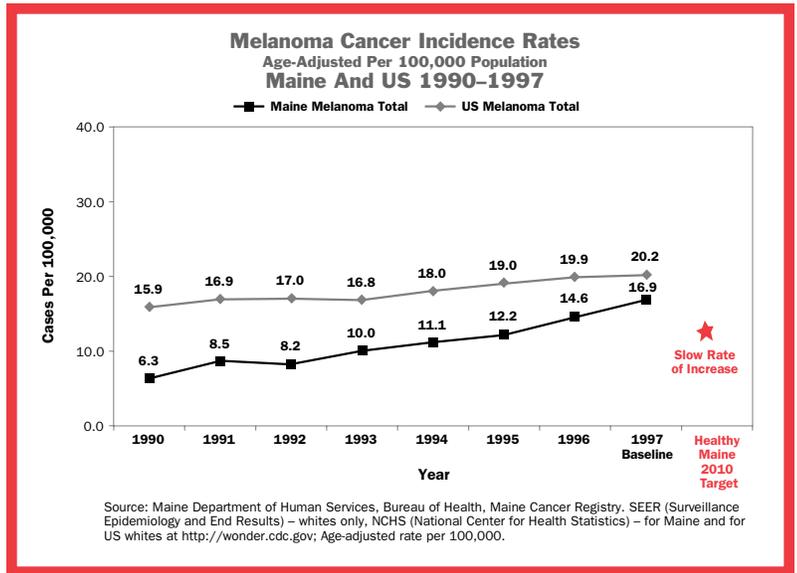
Protective measures include avoiding the sun by staying in the shade when outside during a sunny day for more than one hour between 10 AM and 4 PM; wearing protective clothing such as a long-sleeved shirt or wide-brimmed hat when exposed to sunlight; or using sunscreen with a sun protective factor of 15 or higher. National data not completely comparable to Maine's from 1998 indicate that about 47% of adults regularly use at least one of these measures, including avoiding artificial sources of ultraviolet light. Maine's data show that women are more likely to use some type of protection from the sun than men.





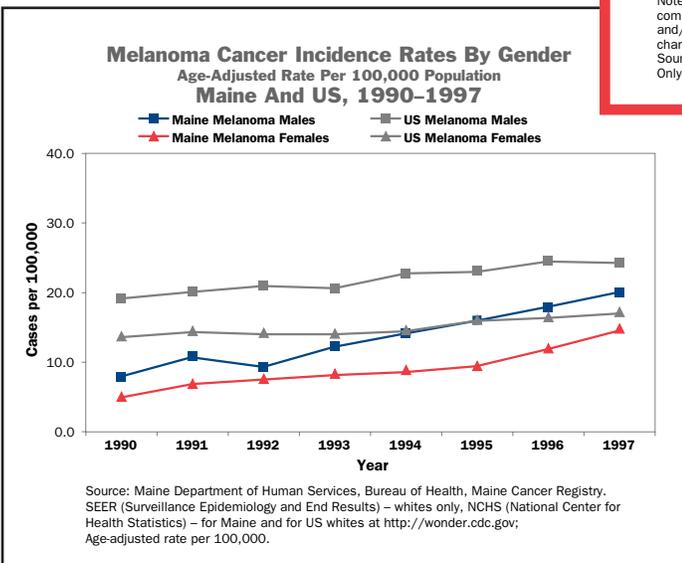
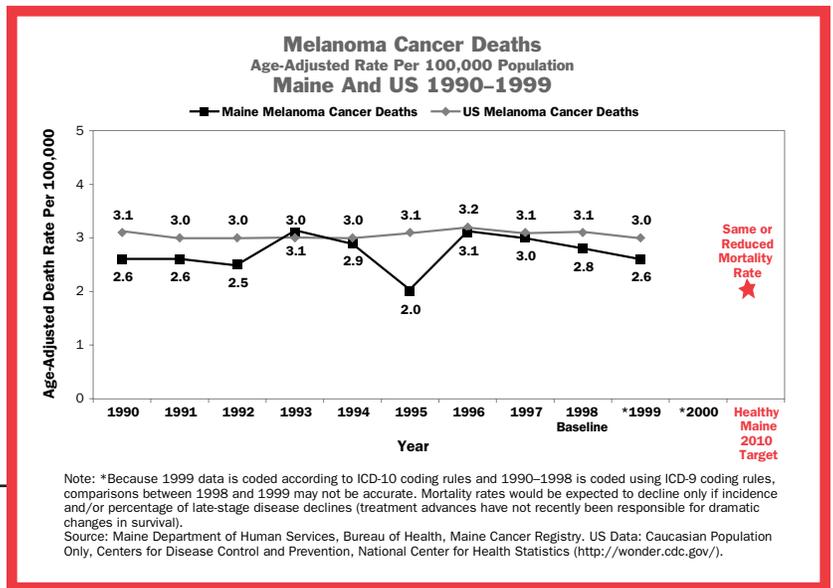
- **Reduce the melanoma cancer incidence rates.**

Healthy Maine 2010 Baseline: 16.9
 Healthy Maine 2010 Target: slowing rate of increase



- **3-8 Reduce the melanoma cancer death rate.**

Healthy Maine 2010 Baseline: 2.8
 Healthy Maine 2010 Target: same or reduced mortality rate



CHRONIC MUSCULOSKELETAL CONDITIONS

Osteoporosis: Osteoporosis, a reduction in bone mass that results in deteriorated and fragile bones, is a leading cause of disability among our elderly, especially women. One in three women and one in eight men over the age of 50 will experience an osteoporotic-related fracture sometime in their lifetime, often leading to functional impairment such as a long-term inability to walk (as a result from hip fractures half the time). With prevention measures, early detection and treatment such as pharmaceuticals and exercise, osteoporosis' impact can be significantly diminished.

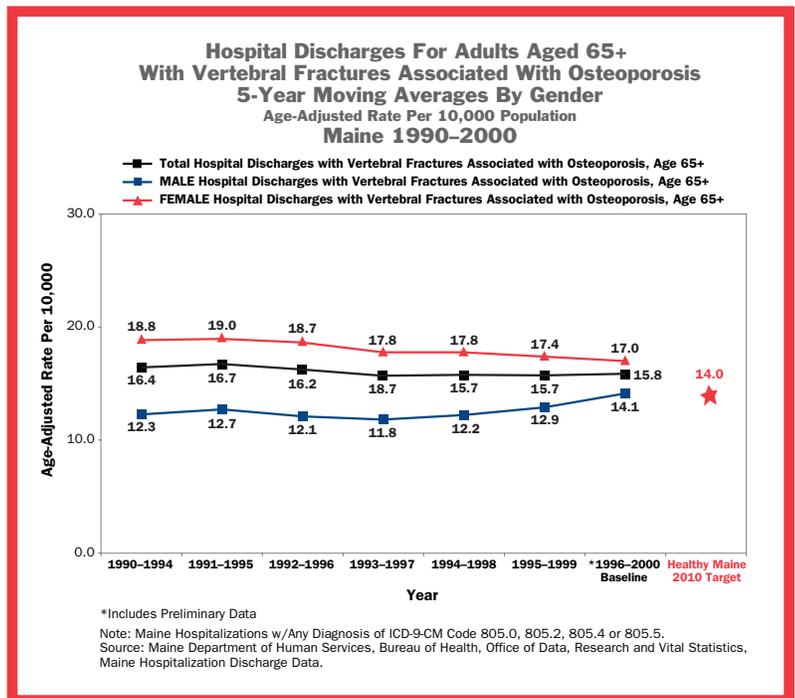
Low Back Pain: With an estimated 80% of all Americans expected to have significant back pain sometime in their lives, low back pain is the most frequent cause of activity limitation in people under the age of 45, the second most common reason for physician visits, and the third most common reason for surgical procedures. Work-related risk factors, such as heavy physical work, lifting, awkward postures, account for 28%–50% of the low back problems in adults. Preventable risk factors for back pain also include overweight, lack of physical fitness, and tobacco addiction. Despite the enormous impact of low back pain, we lack ways to measure ongoing impact and outcomes since we lack standard definitions for low back pain as well as a single source for tracking its prevalence and incidence.

Arthritis: Arthritis is one of the most common conditions in the United States, affecting about one in five of all adults. It is a leading cause of disability, and trails only heart disease as a cause of work disability. Although rarely a direct cause of death, arthritis disrupts one's quality of life – causing economic loss (through decreases in ability to work and high medical costs, especially with the high cost of new prescription medications), limitations in activities, burdens on caregivers, and negative effects on one's mental health.

- **2-10 Reduce the proportion of adults hospitalized for vertebral fractures associated with osteoporosis.**

Healthy Maine 2010 Baseline: 15.8
Healthy Maine 2010 Target: 14.0

National data reported in *Healthy People 2010* from 1998 indicates a national rate of about 17.5 per 10,000 adults per population aged 65 years and older.





WORK GROUP LEADERS

Marie Borgese, MS, CHES
Lung Disease Program Coordinator
American Lung Association of Maine

Patricia Jones, MPA, CHES
Director, Community Health Program
Maine DHS, Bureau of Health

Barbara Leonard, MPH
Director, Division of Community Health
Maine DHS, Bureau of Health

Anita Ruff, MPH, CHES
Coordinator for Cancer Prevention and Control
Maine DHS, Bureau of Health

Debra Wigand, M.Ed., CHES
Director, Cardiovascular Health Program
Maine DHS, Bureau of Health

Fredericka Wolman, MD, MPH (2001)
Maternal Child Health Medical Director and Asthma Liaison
Maine DHS, Bureau of Health

Maryann M. Zaremba
Director, Diabetes Control Program
Maine DHS, Bureau of Health

OTHER SIGNIFICANT CONTRIBUTORS

David Ehrenkrantz, DrPH
Maine DHS, Bureau of Health

Judith Graber, MS
Maine DHS, Bureau of Health

Kathy Tippy, MPH
Maine DHS, Bureau of Health

Castine Verrill, MS
Maine DHS, Bureau of Health

WORK GROUP MEMBERS

First Name	Last Name	Organization Name
Connie	Adler	Family Practice Physician, Farmington
Enoch	Albert	Togus Veterans Administration Medical Center
Laurie	Allard	Brunswick Naval Air Station
Donna	Allen	Maine Department of Human Services, Bureau of Health
Mary Anne	Amrich	Maine Department of Human Services, Bureau of Health
Pamela	Anderson	Excel, University of Maine Law School
Mary Kate	Appicelli	Maine Department of Human Services, Bureau of Health
Kathleen	Askland	Maine Department of Human Services, Bureau of Health
Donna	Atwood	Restoring Inner Balance
Armand	Auger	Pine Tree Family Practice
Stephen	Babirak	Diabetes Center at Maine Medical Center
Terry	Baker	American Cancer Society
Julie	Barnes	Diabetes Center at Maine Medical Center
Maxwell	Barus	DFD Russell Medical Center
Peter	Bates	Maine Medical Center
Joanne	Bean	American Diabetes Association
Betsy	Beauchesne	Oncology Social Work, Maine General Medical Center
Peggy	Belanger	Southern Maine Health and Homecare Services
Leah	Binder	Healthy Community Coalition
Mark	Biscone	Waldo County General Hospital
Janet Whatley	Blum	University of Southern Maine
Annette	Boies	Maine Department of Human Services, Bureau of Elder and Adult Services
Dan	Bondeson	Maine Primary Care Association
Jan	Bondeson	Maine Primary Care Association
John	Boothby	
Saskia James	Bopp	Medical Care Development
Richard	Bruns	Maine Chiropractic Association
Nadine	Bullion	Cancer Care of Maine
Scott	Bullock	Maine General Medical Center
Paulette	Burbank	New England Rehabilitation Hospital of Portland
JoAnne	Bushey	Kennebec Valley Community Action Program, Child & Family Service

First Name	Last Name	Organization Name
Debbi	Byron	Advocacy Initiative Network of Maine
Edgar	Caldwell	Maine Medical Center and American Lung Association of Maine
Kathryn	Caler	Portland Public Health Division
Ronald	Carroll	Maine Medical Center
Beth	Carvette	Anthem Blue Cross and Blue Shield
Alice	Chapin	Maine Health Information Center
Connie	Chapman	American Cancer Society
Trudi	Chase	Mid Coast Hospital
Wendy	Chaston	Town of Appleton Selectman
Christine	Christ	HealthReach Network
Peggy	Chute	Maine General Health
Maureen	Clancy	Portland Public Health Division
David	Clark	Maine Medical Center
Laurel	Coleman	Maine General Medical Center
Steve	Coleman	Maine General Medical Center
Kathryn	Coltin	Harvard Pilgrim Health Care
Rebecca	Colwell	HealthReach Network
Susan	Crippen	North Country Healthy Communities
Karen	Croteau	University of Southern Maine, Department of Sports Medicine
Paula	Curtis-Everett	CIGNA Health Care of Maine
Nell	Davies	Independent Nursing Project
Ron	Deprez	Public Health Research Group
Kip	DeSerres	American Cancer Society
Deborah	Deatrick	MaineHealth
John	Devlin	Diabetes Center at Maine Medical Center
Doug	Dieckmann	American Cancer Society
Mark	DiTullio	Maine General Health
Robert	Downey	Eastern Area Agency on Aging
Thomas	Downing	University of Southern Maine, Lifeline Center
Donald	Dubois	Reddington Fairview General Hospital
Rene	Dumont	Saint Mary's Regional Medical Center
Monique	Dutil	Lewiston Health Department
Nichollette	Erickson	Central Maine Medical Center
Elanna	Farnham	Eastern Maine Medical Center
Connie	Feldman	American Cancer Society
Virginia	Feleppa	Togus Veteran's Administration Medical Center
Terri	Foster	HealthSource of Maine
Karen	Gallagher	Maine Department of Human Services, Bureau of Health
Holly	Gartmayer	Regional Medical Center at Lubec
Robin	Gautier	Regional Medical Center at Lubec
Rena	Gels Birch	Eastern Maine Medical Center
Barbara	Ginley	Maine Migrant Health Program
Linda	Gray	American Cancer Society
Kathie	Greear	Franklin Memorial Hospital
Kathy	Green	Franklin Memorial Hospital
Deborah	Halbach	Maine Academy of Family Physicians
Cindy	Hale	Maine Department of Human Services, Bureau of Health
DeEtte	Hall	Maine Department of Education
Gloria	Hall	Lewiston Health Department
Paul	Hammond	Saint Joseph's Hospital – Cardiac Rehabilitation
Megan	Hannan	American Cancer Society
Julie	Hardacker	Maine Department of Human Services
Betsy	Hart	University of New England
Lisa	Harvey-McPherson	Eastern Maine Health Care
Chris	Hayden	Portland Public Health Division
Mary	Heath	Androscoggin Home Health Services, Hospice Oncology
Nellie	Hedstrom	University of Maine Cooperative Extension
Kate	Herlihy	Maine Medical Center
Maureen	Higgins	Maine Medical Center



First Name	Last Name	Organization Name
Persis	Hope	Maine Dartmouth Family Practice Residency
Teresa	Hubley	University of Southern Maine, Institute for Public Sector Innovation
Ken	Huhn	MSCVPR
Pat	Hutchinson	Maine General Medical Center
James	Jacobsen	Maine Department of Human Services, Bureau of Health
Jeffrey	Jacques	Town of Bingham
David	Johnson	SRISSS
Donna	Jordan	Central Maine Medical Center, Department of Case Management
Len	Keilson	Maine Chapter of the American College of Physicians
Lonnie	Kennedy	Maine Department of Human Services, Bureau of Health
Joseph	Kerwin	Maine Chiropractic Association
Evelyn	Kieltyka	Family Planning Association and Maine Association of Nurse Practitioners
Stephanie	Kimball	Maine General Medical Center
Marsha	Kyle	Penobscot Bay Medical Center, Diabetes and Nutrition Care Center
Janie	Labbe	Southern Maine Medical Center
John	LaCasse	Medical Care Development
Gerald	Lalime	Coastal Dialysis Center
Rhonda	Lamb	Maine Health Learning Resource Center
Kristy	Lavallee	New England Rehab Hospital
Mary	Leary	Maine Department of Human Services, Bureau of Health
Maureen	Leary	American Cancer Society
Don	Leaver	Central Maine Medical Center
Jim	Leonard	Maine Department of Human Services, Bureau of Health
Lisa	Letourneau	MaineHealth
Virginia	Lewis	Maine Primary Care Association
Juliana	L'Heureux	CHANS Home Health Center and Organization of Maine Nurse Executives
G. Allen	L'Italian	Eastern Maine Medical Center
Gail	Lombardi	Maine Department of Human Services, Bureau of Health
Cindy	Look	Maine Department of Human Services, Bureau of Health
Tina	Love	Central Maine Medical Center, Diabetes Education
Christine	Lyman	Maine Department of Human Services, Bureau of Health
Bonnie	MacInnis	VNA Home Healthcare
Donald	Magioncalda	Maine General Medical Center
Dervilla	McCann	Androscoggin Cardiology Associates
Selina	McGlaufflin	Maine Department of Human Services, Bureau of Health
Susan	McKenney	Anthem Blue Cross and Blue Shield of Maine
Helen	McKinnon	Eastern Maine Medical Center
Lynn	McLeod	York County Dialysis Center
Faith	McMullen	USM, Muskie School of Public Service and Maine Roads to Quality
Phyllis	McNeily	Penobscot Bay Medical Center
Michael	Meserve	Maine Medical Center
Dan	Meyer	Maine-Dartmouth Family Practice Residency
Peter	Michaud	Eastern Maine Medical Center
Edward	Miller	American Lung Association of Maine
Jeffrey	Miller	Central Maine Medical Center, Hematology-Oncology
Sharon	Mishou	Androscoggin Kidney Center
Robin	Montgomery	Cancer Community Center
Mary-Carmela	Moreau	Anthem Blue Cross and Blue Shield
Linda	Morneault	Maine Breast Cancer Coalition
Nancy	Morris	Maine Health Alliance
Natalie	Morse	Maine General Health Medical Center
Michelle	Mosher	Maine Department of Human Services, Bureau of Health
Ellie	Mulcahy	Maine Department of Human Services, Bureau of Health
Diane	Mulkhey	Central Maine Medical Center
Fran	Mullin	Family Planning Association of Maine
Roxanne	Munksgaard	AFL-CIO
Daniel	Nadeau	Eastern Maine Medical Center
Nellie	Nadeau	Southern Maine Medical Center
Deborah	Nelson	Southern Maine Medical Center

First Name	Last Name	Organization Name
Iver	Nielson	Reddington-Fairview General Hospital
Rhonda	Norman	Healthy Maine Community Coalition
Brenda	Obert	Governor's Council on Physical Fitness
Lisa	Obstfeld	
Martha	O'Connor	Community Health Services
Nancy	Oden	CLEAN: Maine
Thomas	Openshaw	Eastern Maine Medical Center, Cancer Care of Maine
Karen	O'Rourke	Maine Center for Public Health
Margaret	Parsons	Maine Department of Human Services, Bureau of Health
Levi	Patch	Levi Patch Partnership
Dean	Paterson	Health Care Solutions
Sally-Lou	Patterson	Maine Department of Human Services, Bureau of Health
Patricia	Peck	Southern Maine Medical Center
Katherine	Pelletreau	Maine HMO Council
Patricia	Perrier	Southern Maine Oncology Nurses Society
Lynda	Persico	Maine General Medical Center
David	Peterson	County Dialysis Center
Diane	Peterson	Maine Medical Center
Terrence	Pickett	Maine Medical Center, Maine Center for Cancer Care
Jan	Pilotte	Eastern Maine Medical Center
Bonnie	Post	Maine Primary Care Association
Kandyce	Powell	Maine Hospice Council
Bill	Primmerman	Maine Department of Education
Vicki	Purgavie	Home Care Alliance of Maine
Jean	Rabon	Central Maine Medical Center – Trauma Program
James	Raczek	Eastern Maine Medical Center
Karen	Rasmussen	Maine Center for Cancer and Blood Disorders
Judy	Rawlings	Healthy Community Coalition
Sunita	Raynes	University of Southern Maine, Muskie School of Public Service
Vickie	Rea	Maine Cardiovascular Health Council
Janet	Rensink	Central Maine Medical Center, Department of Social Work
Sandy	Richard	Healthy Community Coalition
Peter	Richen	
Valerie	Ricker	Maine Department of Human Services, Bureau of Health
Lewis	Rioux	MDI Community Health Plan
Susan	Robinson	Togus Veterans' Administration Medical Center
Tammy	Rolfe	Maine Department of Human Services, Bureau of Health
Laura	Ronan	Medical Care Development
Joanne	Rosenthal	Jewish Family Services
Stephen	Ross	Penobscot Bay Medical Center
Chris	Sady	University of Southern Maine, Muskie School, Maine Nutrition Network
James	Schneid	Maine Dartmouth Family Practice Residency
Randy	Schwartz	American Cancer Society
Stephen	Sears	Maine General Health Center
Stephen	Shannon	University of New England, College of Osteopathic Medicine
Paul	Shapans	
Paul	Shapero	
Terrence	Sheehan	Southern Maine Medical Center
Betsy	Shiers	York County Dialysis Center
Sharron	Sieleman	Central Maine Medical Center
Philip	Slocum	Martin's Point Health Care
Michelle	Small	American Cancer Society
Andrew	Smith	Maine Department of Human Services, Bureau of Health
Nancy	Sonnenfeld	University of New England
Betsy	St. Germain	Maine Medical Center
Jill	Standish	



Chronic Disease

First Name	Last Name	Organization Name
Dawn	Stephen	CIGNA Health Care of Maine
Dawn	Stiphen	CIGNA Healthcare of Maine
Tina	Streker	
Kathy	Stuchiner	Maine Hospital Association
Anne	Summer	
Maureen	Summers	Maine General Medical Center – Workplace Health
Stephanie	Swan	Maine Department of Education
Wendy	Tardif	Central Maine Medical Center
Andrea	Thompson	Portland Public Health Division
Donna	Thompson	Central Maine Medical Center
Doug	Thompson	IPSI, Muskie School of Public Service, University of Southern Maine
David	Timmerman	Southern Maine Medical Center
Meredith	Tipton	University of New England
Carl	Toney	University of New England
Clough	Toppan	Maine Department of Human Services, Bureau of Health
Edward	Trainer	Medical Care Development
Cheryl	Tucker	American Cancer Society
Ginny	Vaitones	HealthReach Network Hospice
Toni	Wall	Maine Department of Human Services, Bureau of Health
Candace	Walworth	Maine Nephrology Society
James	Wasserman	Maine Nephrology Associates
Pat	Watson	Stephens Memorial Hospital
Karen	Welch	Downeast Association of Physician Assistants
MaryBeth	Welton	Maine Department of Human Services, Bureau of Health
Mary Ann	Weston	Maine Department of Human Services, Bureau of Health
Richard	White	Healthsource Maine, Inc.
Katherine	Wilbur	Maine Department of Education
Phyllis	Wolfe	Bath Iron Works
Bob	Woods	Maine Department of Human Services, Bureau of Health
Elihu	York	Maine Medical Association